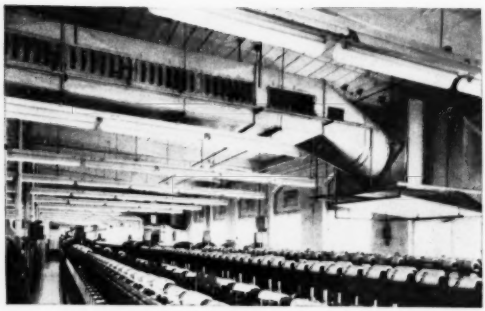
JULY, 1952

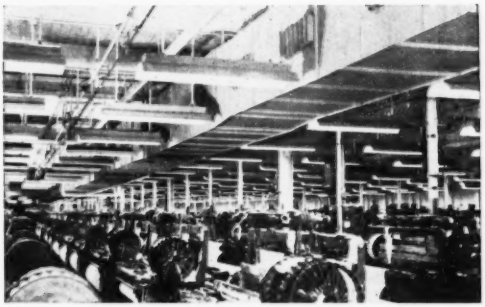
# Textile Industries

formerly COTTON Textile Industries

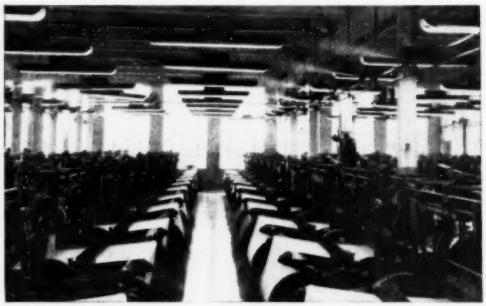
## CERTIFIED CLIMATE–1952



Automatic Airchanger
with Gradumatic Humidification



Central Station Air Conditioning alone—or with
Gradumatic Boosters—or with Refrigeration



Gradumatic Humidification

All with Gradual Acting
Psychrostat Regulation

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Complete New Installations. Revamping and Modernizing of Existing Systems.
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FITCHBURG, MASS. CHARLOTTE, N. C.

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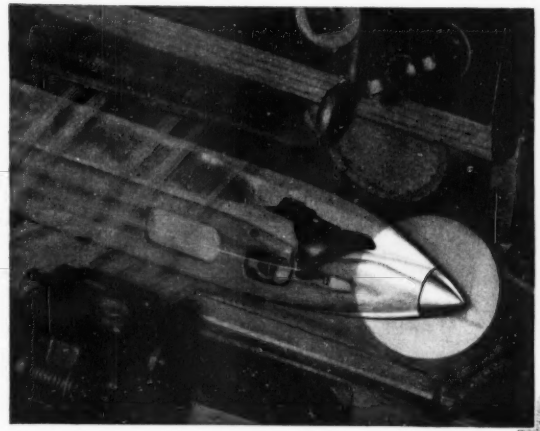
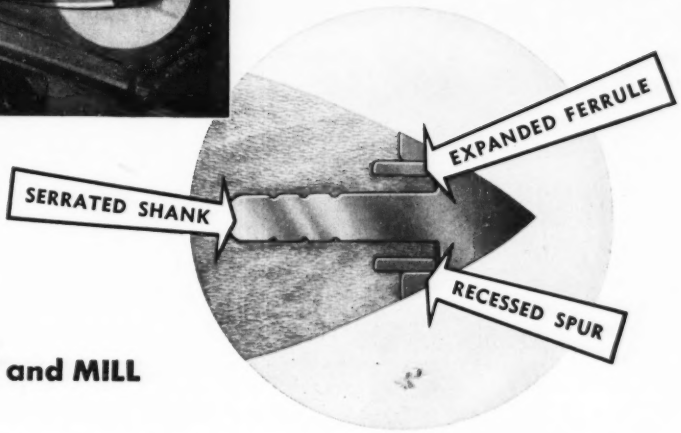
Volume 116 Number 7

# 50% GREATER HOLDING POWER!



## with the NEW DRAPER *Recessed* SHUTTLE SPUR*

**PROVEN IN LABORATORY and MILL**




Having 50% greater holding power, the Draper Recessed Spur resists the common shuttle spur tendency to loosen, revolve, and move off-center. It can be supplied with or without a fibre washer.

The Draper Recessed Spur has been proven in the laboratory and in an ever increasing number of mills for more than four years.

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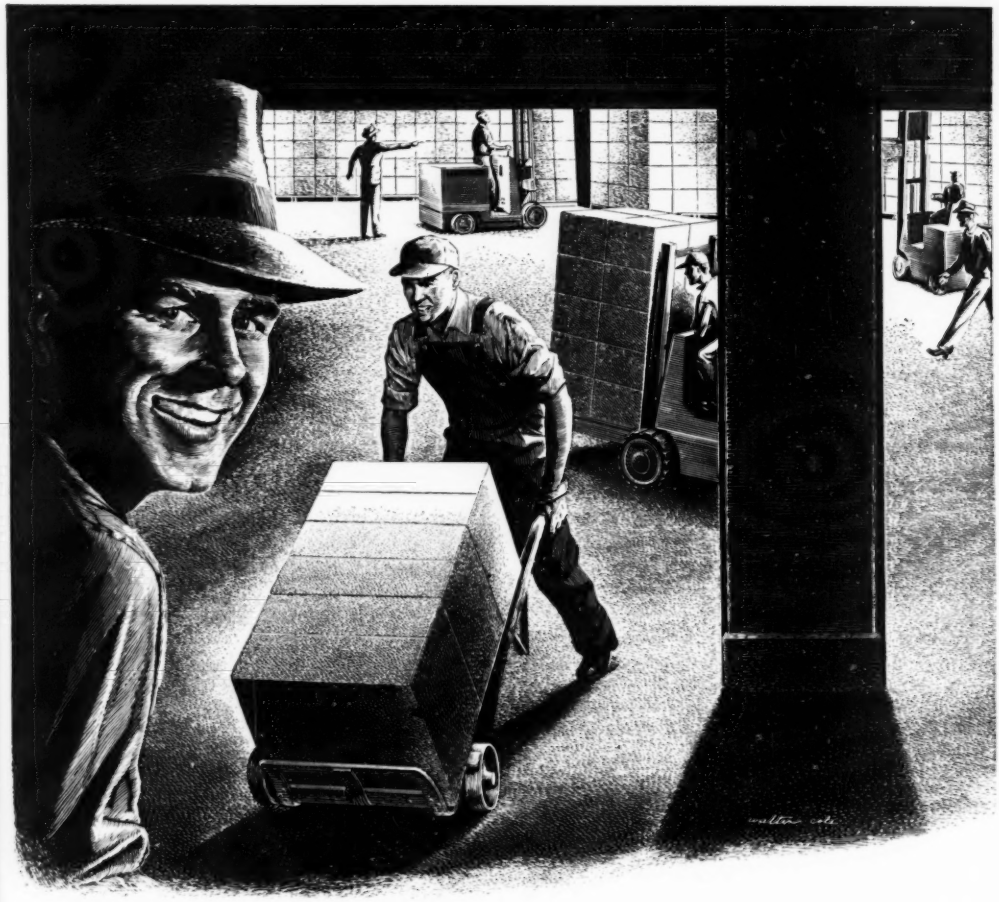

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Textile Industries
COTTON
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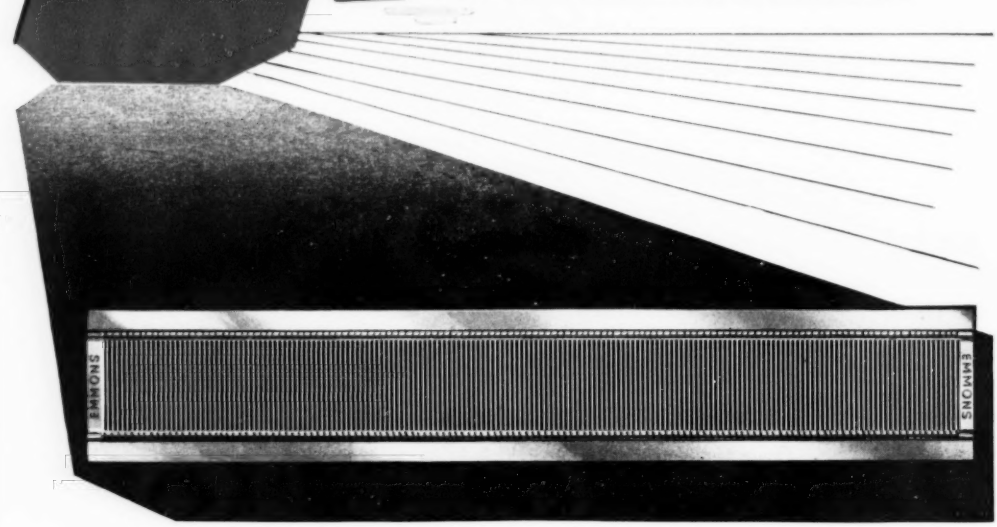
*Editorial and Executive Offices: 806 Peachtree St., N. E., Atlanta 5, Georgia*

For names and addresses of editorial and business representatives, see page 173

# EMMONS *The Name in Loom Harness*




# EMMONS

**WEAVE ROOM EQUIPMENT**

## 85 Years of Constant Improvement!

Year by year for the greater part of a century, we have pioneered improvements in weave room equipment — with the constant aim of providing you with products that do their job better, last longer, give more value for your investment.

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# Only B. F. Goodrich makes the grommet belts that cut costs 20 to 50%!

## *Save 3 ways! Investigate today! Write or mail coupon*

You save belt costs because belts last longer, save production costs because machines keep running with fewer interruptions, save maintenance costs because they need less attention.

Patented grommet belts by B. F. Goodrich represent the only basic change since invention of the V belt. Belts last 20 to 50 per cent longer, depending on service. (The more severe the service, the greater the increase over ordinary belts.) Grommet belts have more rubber; they're more flexible, give better grip, less slip.

### *What is a grommet?*

A grommet is like a giant cable except that it's *endless*—a cord loop built up by winding heavy cord on itself. There is no overlapping cord *section* as in all ordinary belts. Most belt failures occur in these sections where cords overlap!

### *All cords put to work*

Each of the two grommets and every part of a grommet carry their share of the load. In ordinary belts under high tension the center cords "dish" because tension is greater near the driving faces. Dished cords are doing less work, not pulling their share. Grommet belts have no center cords, there is no dishing—therefore much more strength in proportion to cord volume—and less stretch. Grommet belts stretch, on an average, only about one-third as much as ordinary belts.

### *Better grip, less slip*

Grommet belts have more rubber in relation to belt size. Without any stiff overlap, they're more flexible, grip pulleys better. Size for size, grommet belts give ⅓ more gripping power, pull heavier loads with a higher safety factor. Because there is less slip, there is also less surface wear.

### *Send for proof*

Send the coupon for a set of reports telling users' experiences and showing actual installations where grommet belts outlasted all others. Some typical cases:

". . . within a few days ordinary belts had stretched . . . After six months of 24-hour-a-day service BFG grommet belts haven't stretched at all . . ."

"Ordinary belts lasted only 5 or 6 weeks . . . B. F. Goodrich grommet belts are in their sixth month of service . . ."

"Previous belts suffered from shock loads, wore out fast . . . BFG grommet belts have been in service 2 years with no shut-downs..."

There are hundreds of cases like these.

### *They cost no more*

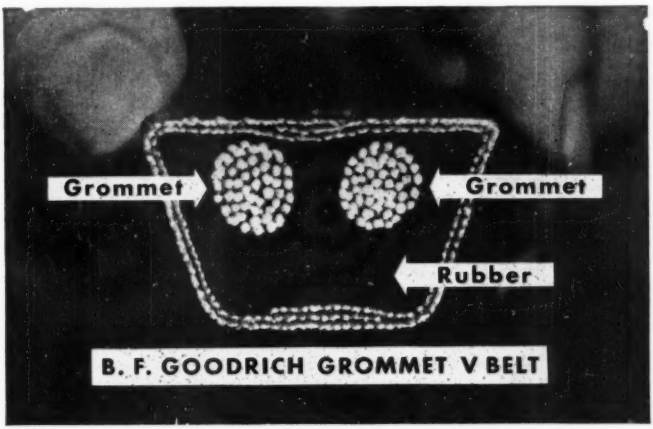
BFG grommet belts cost not one cent more than others. The savings they make for you are clear profit. They are made in C, D and E sections. They are patented by B. F. Goodrich. No other V belt is a grommet belt (U. S. Patent No. 2,233,294).

Write, send the coupon or see your B. F. Goodrich distributor. (He will show you his "X-ray" belt that shows the grommet construction clearly.)

*Grommet V Belts* BY

**B.F.Goodrich**

FIRST IN RUBBER




**The B. F. Goodrich Company**
**Dept. TI-7**
**Akron, Ohio**

☐ Send set of reports telling users' experiences and showing actual installations proving that B. F. Goodrich grommet belts outlast all others.

☐ Have distributor show me the "X-ray" belt that shows how B. F. Goodrich grommet belts are made.

Name_____

Firm Name_____

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Street Address_____

City_____

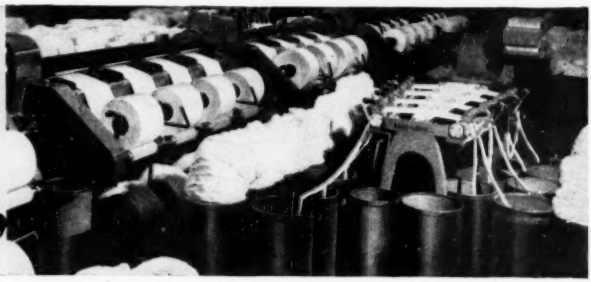
State_____

Here are a few quotes from

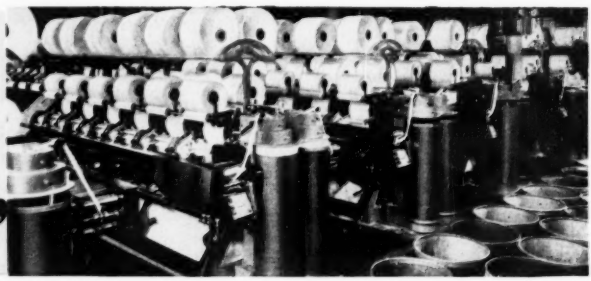
# Fitchburg Yarns

the publication of
Fitchburg Spinners Sales Corporation
which represents Fitchburg Yarn Company,
Watatic Spinning Mills, Inc. and
Wachusett Spinning Mills, Inc.
long-time users of Saco-Lowell equipment.

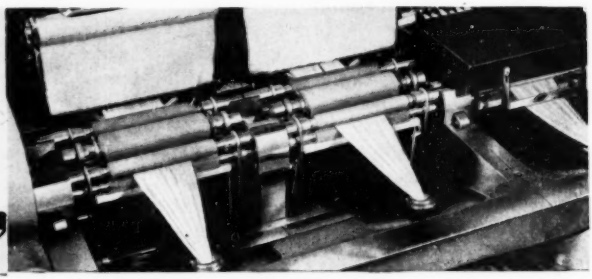
"**ENDS X ENDS X ENDS**... part of the formula for producing a better quality yarn, faster. These new lap winders and drawing frames combine 320 ends into a ribbon lap where previously it had been possible to join only 64. Laboratory tests prove the sliver is evener and better prepared for the next step, the comber."



"**TWO HEADS ARE BETTER THAN ONE**... and these new combers prove it by producing three times as much as the old style. Better than that the yarn is cleaner and the combing much more complete. Variation in the sliver from these combers has been cut by 50%."



"**NEW DRAFTING**... with improved rolls that turn at precisely controlled speeds has reduced variation in this operation. Yarn is drafted evenly by vari-sized rolls, each turning at a carefully set speed. With short fibres removed in the comber the 1,920 ends are now joined in a single even sliver."



**These are important results of careful production testing in the manufacture of quality yarns.**

*On request, a Saco-Lowell engineer will gladly discuss with you the many features of Saco-Lowell Combers and 3-over-4 Drawing Frames.*

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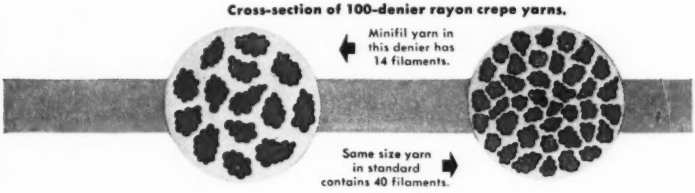
Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y. June, 1951

# AVISCO INTRODUCES NEW "MINIFIL" CREPE YARNS

### *Provide new crepe effects to meet current fashion requirements*

The demand by women's ready-to-wear designers for "Something new in crepes" is being met by the newly-developed Avisco "Minifil" yarns. As the name implies, these yarns contain the minimum number of filaments required to obtain proper performance in specific yarn sizes. For example, the standard 100-denier crepe yarn contains 40 filaments. 100-denier Minifil yarn consists of 14 filaments. Woven into crepes and other fashion fabrics these yarns impart a hand that is firmer and crisper with excellent draping characteristics.




Cross-section of 100-denier rayon crepe yarns.

These features answer the needs of the fast emerging soft-shape silhouette now being featured in the collections of leading designers and promoted editorially by America's foremost fashion authorities. Their introduction at this time typifies Avisco's close cooperation with the textile industry, to provide the types of yarns needed by the industry to capitalize on constantly changing markets.

One of the new soft-shape dresses in a "Minifil" crepe.

Ankle-length hose by Baker-Cammack Hosiery Mills, Burlington, North Carolina

### *Avisco Filatex and rayon yarns important factor in volume market for men's hosiery*

Volume hosiery producers are turning more and more to Avisco Filatex and rayon yarns to meet consumer demand for men's hose that combines excellent styling and maximum quality at a reasonable price. Filatex has been particularly important in influencing the trend to self-supporting socks. Its lasting elasticity, durability and good laundering qualities are contributing to the wearing qualities and sales appeal of socks in all price ranges.

**MAKE USE OF *Avisco*® 4-PLY SERVICE**

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

**1** FIBER RESEARCH
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**3** FABRIC PRODUCTION
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When you see performance like that, it's easy to think that traveler costs are too small to be worth bothering about. But such records are achieved only when you choose the right traveler for the job, and get the best that money can buy.

Selecting travelers carelessly, without proper regard for quality, will quickly cut down the "mileage". Also, excessive ends down, plus frequent traveler changes, can boost your traveler-pound cost in yarn production far out of line.

When you choose Victor Travelers, a Victor Service Engineer will help you make sure to get the traveler best suited to your individual spinning or twisting. You also get extra long traveler-life, because Victor Travelers take top honors in any test for quality and uniformity.

Remember, traveler costs per pound of yarn depend, *never* on price, *always* on performance. Plan now to talk to a Victor man, whether you are running conventional fibers, synthetics, or blends. Write, wire or phone the nearest Victor office . . . for prompt service.

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# 6 Times the service

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Ordinary belts—costing $13.00 each—failed in three months because of heavy overload on cotton delinting machine. *Total belt cost in 18 months about $78.00.*

The G.T.M.—Goodyear Technical Man—recommended COMPASS endless flat belt which has served 6 times as long and is still going. COMPASS *belt has been running 18 months at cost of about $20.00.*

Ordinary belts – Total Cost $78
COMPASS belt–same period $20
GOODYEAR INDUSTRIAL RUBBER PRODUCTS
GTM-Specified COMPASS CORD FLAT BELT
for COTTON DELINTING MACHINE DRIVE
16" DIA. DRIVEN PULLEY
7½" DIA. DRIVER PULLEY
960 RPM–10 HP MOTOR
8½" DIA. FIXED IDLER
41½" c/c

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Compass–T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

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## THESE MOTORS NEED NO LUBRICATION

Westinghouse pre-lubricated bearings are paying big dividends to users throughout the textile industry in many ways. Lubrication maintenance is out! Factory sealed, pre-lubricated bearings need no further lubrication. Down time from bearing failures due to over or under greasing is a thing of the past. Pre-lubrication is positive. And there is no chance for dripping grease to spoil the product.

### Life-Line Loom Motors

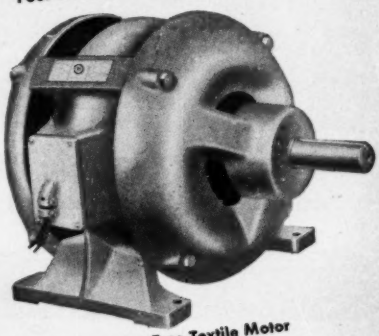
Have balanced design, with an ideal combination of speed-torque characteristic and fly wheel effect, resulting in optimum loom performance. Life-Line construction provides maximum strength, minimum dimensions, and a smooth easy-to-clean finish.

### Lint-Free Motors

Streamlined, highly polished, stator windings and smooth internal surfaces prevent clogging and offer no foothold for lint to accumulate.

Both these motors are available. Act now. Call or wire your nearest Westinghouse Electric Corporation Office.

Foot-Mounted Life-Line Loom Motor



Lint-Free Textile Motor

YOU CAN BE SURE...IF IT'S
Westinghouse

TEXTILE MOTORS
and CONTROLS

# Control Buy Today

Loom Motor Starter on Mounting Pedestal

## REDUCE FIRE HAZARDS WITH THIS LINT-TIGHT STARTER

**Report:** "According to a study of weave-room fires by the Associated Factory Mutual Fire Insurance Companies for the period of 1935 to 1945, 38.8 per cent of the electrical fires in weave rooms were caused by loom motor starters."

## Approved by Associated Factory Mutual Fire Insurance Companies

Designed in collaboration with the engineering division of the Associated Factory Mutual Fire Insurance Companies and leading textile manufacturers, this starter is aimed specifically at reducing weave-room fire hazards. No chance for combustible lint and dust to reach contacts and spark an explosion. It's the only starter approved by the Associated Factory Mutual Fire Insurance Companies.

## Best motor protection you can buy

Outstanding Westinghouse features assure positive motor protection and long motor life. Positive bimetallic overload protection . . . quick-make—quick-break toggle mechanism . . . "De-ion®" arc quenchers . . . Bonderized enclosure.

Get the advantages of this fine starter. Act now. Fast service. Phone your Westinghouse representative today. J-21673

**IMMEDIATE ACTION**

Westinghouse Electric Corporation
P. O. Box 868
Pittsburgh 30, Penna.

*Send complete information on following:*

| | |
|---|---|
| ☐ Lint-Free Motor | DB-3880-2 |
| ☐ Loom Motor | DB-3880-1 "CSP" |
| ☐ Loom Motor Starter | B-5256 and DB10-100-1 |

Name_____

Company_____

Address_____ City_____ State_____

# Got a scouring problem?

*. . . Houghton's knowledge of surface active agents can very probably help you find the right answer.*

Helping mills to find just the right formulas to scour things better, faster and cheaper has resulted in a series of highly efficient Houghton detergents with the well-known "Cerfak" trade mark.

Loosening stubbornest soil, holding the dirt in suspension, and keeping it out of scoured fibers and fabrics, is a job you'll find *every* "Cerfak" does well.

But each type has its special place in wet processing today. Several act even faster than others—and are used where extra speed is needed. Some also have exceptional wetting power, for applications requiring super-penetration. Some work best for boiling . . . or for alkaline scouring . . . or in hard water that would stump ordinary detergents.

High scouring costs, off-color work, slowed-down processing—are some of the signals to call the Houghton Man for practical help. Our wide textile experience and know-how are showing measurable improvements in mills throughout the country. What better reason could there be for submitting your processing problems to E. F. Houghton & Co., Philadelphia 33, Pa.

**IT WILL PAY YOU TO KNOW THE HOUGHTON LINE OF *WET PROCESSING AGENTS* . . .**

**CERFAK** { the trade name to specify when *detergency* is the chief factor you want.

**SURFAX** { selected whenever exceptionally good *wetting* and *re-wetting* power is needed.

New Bulletin on "Surface Active Agents" Mailed on Request

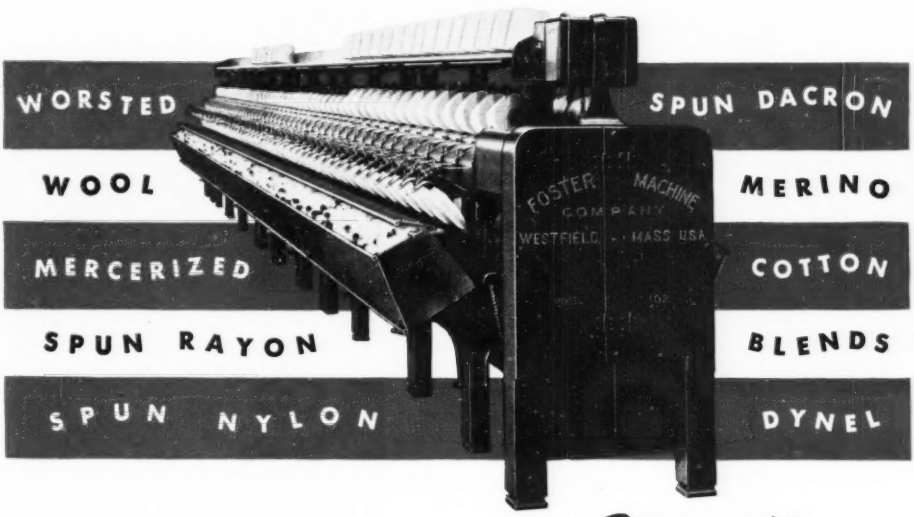
. . . products of

**E. F. HOUGHTON & CO.**

PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

*Ready to give you on-the-job service . . .*

# FOSTER MODEL 102 *The Flexible Winder*




## WHAT WE MEAN BY *"Flexible"*

The dictionary defines "flexible" as "readily adjustable to changing conditions", and that describes Foster Model 102 Winder — exactly. For instance:— If you are making cotton goods now, but change to worsted or worsted type fabrics, you don't have to worry about changing or rebuilding winders if you have the Model 102. Just make a few minor changes, such as changing thread guides and angle of wind, and you're ready to go.

It's simple to alter the angle of wind, too. Just change four small gears in the head end of the machine. In this way nine different angles of wind from 9° to 18° can be obtained — a wide enough range to take care of any count of yarn from the finest to medium coarse and any type of fibre.

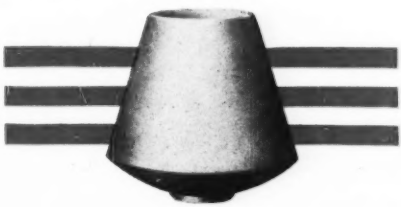
This flexibility feature is highly important, because if you make a radical change in the type or count of yarn, the angle of wind *must* be changed also. Otherwise, you'll get bulging and poorly shaped cones that will cause trouble in subsequent operations. There's no such thing as a median angle of wind which is satisfactory for all types and counts of yarn.

The Foster Model 102 has other flexibility features. Space does not permit a listing of them here, but if you wish a complete list, write for a copy of "FOSTER FACTS" — Volume 2, Number 2. It's yours for the asking, free of all obligations.

**FOSTER MACHINE COMPANY**

*Westfield, Mass., U.S.A.*

Southern Office: Johnston Bldg., Charlotte, N. C. • Canadian Representative: Ross Whitehead & Company Limited, 1475 Mountain St., Montreal, Que. • European Representative: Muschamp Taylor Limited, Manchester, England.



THIS IS NO. 93 OF A SERIES ON

# GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

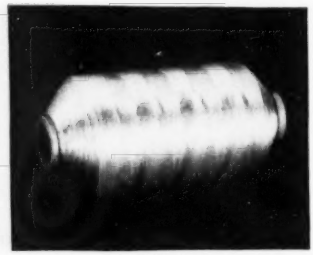


*Fig. 1*

## WINDING BRAIDER PACKAGES OF GLASS YARN on the No. 50 Leesona® Winding Machine

More and more mills are winding Single or Multiple End Braider Packages of glass yarn with equally receding tapers at both ends (Fig. 1) on the No. 50 Leesona Winding Machine with the Taper-End Tube Attachment.

You can readily understand why. They know that Taper-End Packages of glass yarn overcome an end breakage condition at the braider which commonly occurs when straight-end packages are used.

That condition is caused by the slippery nature of glass fibres. Outer coils of glass yarn slide down off the lower end of the Braider Supply Packages whenever the Braider is stopped. When the Braider starts up again, the sharp corner on a straight-end package catches the yarn as it tries to get back onto the package and sometimes breaks it.

With a taper-end package, however, the yarn is easily pulled over the receding taper and back onto the surface of the package.

Let's take a close look at the Taper-End Tube Attachment (Fig. 2). It consists principally of Taper Bar (A) and Builder Cam (B) which determine the angle of taper and permit a variety of angles.

*Here's how it works.* You control the operation of the Taper Bar by setting the Builder Cam to indices in the Builder Cam Bracket (C). You'll notice that this Bracket has graduations from 0 to 4. These graduations help you determine any particular setting and record it for future use.

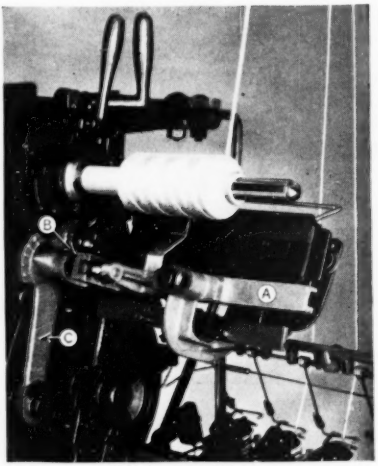



*Fig. 2*

*You use your judgment* to determine the right setting for any desired taper. In other words, you arbitrarily set the Builder Cam, Builder Cam Bracket and Traverse Frame Stop. With the indicator on the Builder Cam set at "0", the attachment winds packages with little or no taper on the ends. You increase the angle of taper by moving the indicator toward "4".

In this way you get equal tapers at both ends of the tube in the angle of taper you want anywhere between 12° and 63° from vertical. Of course, these angles are dependent upon the amount of yarn required on the tube to make a symmetrical package. The bigger the finished diameter, the slighter the taper from the vertical.

You can get starting traverses up to 6″ with the Taper-End Tubing Attachment. You adjust your traverse length with the Builder Cam Bracket (C). It has elongated slots which let you raise the bracket to lengthen the traverse and lower the bracket to shorten the traverse.

*To obtain equal tapers at both ends* of the package you, naturally, have to start with the traverse of the thread guide centralized.

It's easy to centralize the traverse guide. We'll be glad to tell you about it — on request.

23.1.6

June, 1952

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

# UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON

# A KNITTER'S DREAM COME TRUE !!!

## SUPREME'S
## Amazing, New
## Super-Loop Terry Striper!

**Model LT/SA***

**New, Long-Loop Terry Knit With Automatic 4-Color Stripes!**

**Supreme's Most Terrific Multi-Fabric Sales-Knitter!**

Opens A Gold Mine Of New Sales Possibilities In Beachwear, Outerwear and Sportswear!

Snag-resistant Super-Loops Easily Adjustable For Different Lengths and Densities!

**Uses Wide Variety of Natural and Synthetic Yarns For Consumer-appealing Texture Variations!**

Variable Striped or Solid Terrys — Light or Heavy Weight — PLUS — The Entire Range Of Model SA Jersey and Automatic Stripes!

**Knits Wide Range Of Yarn Sizes For Weights Varying From Heavy Bathrobe Terry To Light Polo Shirt Fabric!**

Easily Convertible, On The Job, Into Any Machine In Supreme's Famous Striper Line. Produce The Entire Supreme range of patterned, striped or pattern-placer cloth!

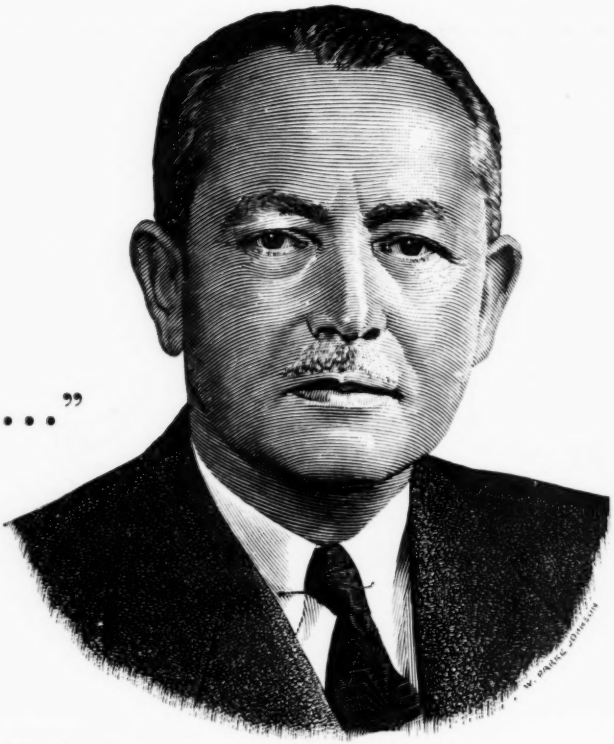
**Up To 20 Yds. Per Hour Striped Terry. Up To 30 Yds. Per Hour Single Color Terry. As An Automatic Jersey Striper—Up To 40.5 Yds. Per Hour Plain Jersey and Up To 25 Yds. Per Hour Automatic Stripes.**

**Pinch yourself and then write for the complete story and sample swatches.**

**SUPREME**
KNITTING MACHINE CO., INC.
107 JOHNSON AVE. BROOKLYN 6, NEW YORK, N. Y.
Southern Representative and Showroom:
The Mallack Co., 711 S. Tryon St., Charlotte, N. C.

*Patent Pending

## "... *opportunity is freely given...*"



**PAUL M. HAHN**
President, The American Tobacco Co.

***"Our nation has grown great largely because opportunity is freely given. Only very few people actually make their own 'breaks.' Today, millions of Americans are providing for their personal financial security and at the same time helping in the building of our national defenses. The opportunity to do so is given by business management which affords employees the means of practicing systematic thrift through the Payroll Savings Plan for the purchase of U. S. Defense Bonds."***

Nearly seven million employees of industry are "providing for their personal security and at the same time helping in the building of our national defenses."

- they are the men and women who availed themselves of the opportunity referred to by Mr. Hahn—the opportunity to enroll in the Payroll Savings Plan for the systematic purchase of U.S. Defense Bonds.
- they represent a high percentage of their companies' employees—in plant after plant, the averages are climbing to 60%, 70%, 80%—even higher.
- their investment in Defense Bonds—and America—add up to $140 million per month.
- they constitute a large block of the men and women who on December 31, 1951, held Series E Bonds amounting to $34,727,000,000—$4.8 billions more than the cash value of Series E's outstanding in August, 1945.

Not far from you is a State Director of the Savings Bond Division. He will be glad to tell you how easy it is to give your employees a Payroll Savings Plan. Or, if you already offer the Plan to your people, he will show you how to conduct a simple person-to-person canvass of your plant—a canvass intended to do only one thing—to put a Payroll Savings Application Blank in the hands of every man and woman on your payroll. Your employees will do the rest.

Phone or write to Savings Bond Division, U.S. Treasury Department, Suite 700, Washington Building, Washington, D. C.

*The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and*

**TEXTILE INDUSTRIES**

## Quality Keeps Them Sold

Color sings out to catch the buyer's eye, rouses desire that is easily converted into sales. And the QUALITY of Franklin Process Fast Color Yarns keeps the buyer contented, subtly recommending repeat purchases from the same source.

Franklin Process

LARGEST PACKAGE DYERS IN THE WORLD

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# TUFFER CYLINDER CLOTH
## the finest Card Clothing Foundation on the market

A Tuffer Tension Regulator and Motor Drive as used in the illustration greatly simplify the work of clothing a roll. It does a smoother job and saves much time and money.

One of the reasons our customers get such good results from TUFFER Card Clothing is because of the unique construction of the TUFFER Cylinder Cloth.

This foundation is made of four plies of specially designed fabrics carefully woven. They are bonded together with oilproof adhesive in our special way which gives you a strong foundation, yet pliable enough to promote the proper carding action of the wires when on your card.

TUFFER Cylinder Cloth was developed and patented by Howard Bros. after many years of research. A trial will convince you that it is the finest foundation available. Our complete line of foundations for card clothing includes wool face, felt face and rubber faces and specialties.

**HOWARD BROS. MFG. CO.** WORCESTER 8, MASSACHUSETTS

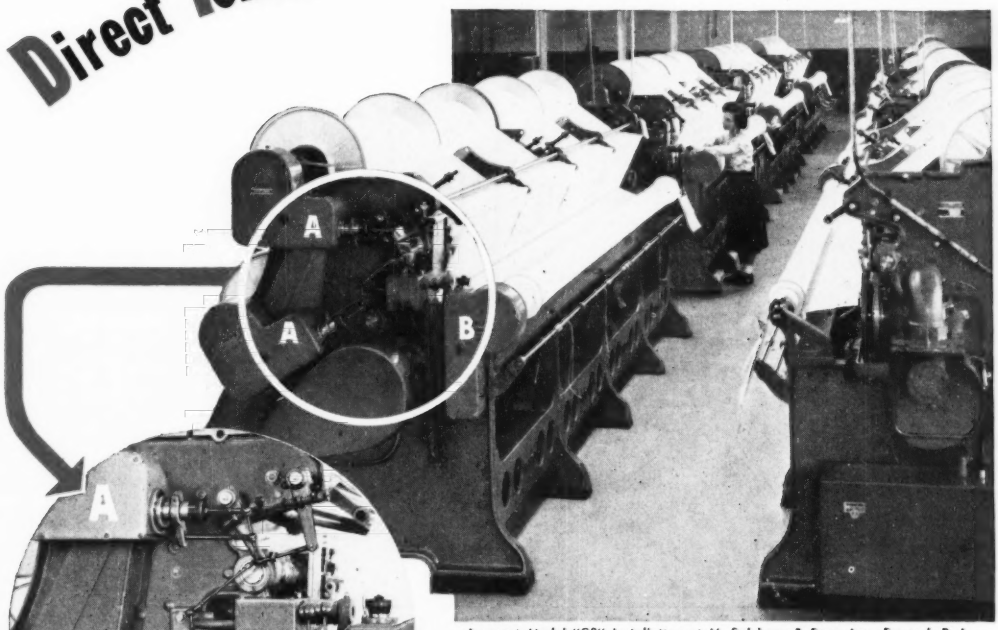
Southern Plants: Atlanta, Georgia and Gastonia, N. C. Branch: Philadelphia, Pa.

*Direct Representation in Canada*

A-4

**. . . IT PAYS TO SPECIFY TUFFER CARD CLOTHING**

# Direct Tension Control = Direct Savings!




*A recent Model "C3" Installation at M. Salzberg & Sons, Inc., Esmond, R. I.*

The top and bottom beams are each controlled by improved independent yarn let-off controls (A, A) which assure accurate "runner" control. Fluid driven, they provide positive, sensitive and direct tension-bar-activated yarn control.

Uniform fabric tension is maintained by the new, simplified cloth take-up control (fluid driven) (B) which eliminates the need for intermediate tension rolls, and provides a working area easily accessible to the needle bar.

## ONE of the many advantages of the MODEL "C3" TRICOT MACHINE

Direct Tension Control, provided by the newly improved yarn let-off and cloth take-up controls featured on the "C3" Tricot Knitting Machine means Direct Savings for you. Direct Tension Control reduces shade marks to a minimum, improves fabric quality and cuts costly cloth imperfections. End breakages, too, are greatly reduced, and the over-all efficiency of both the machine and operator are considerably increased.

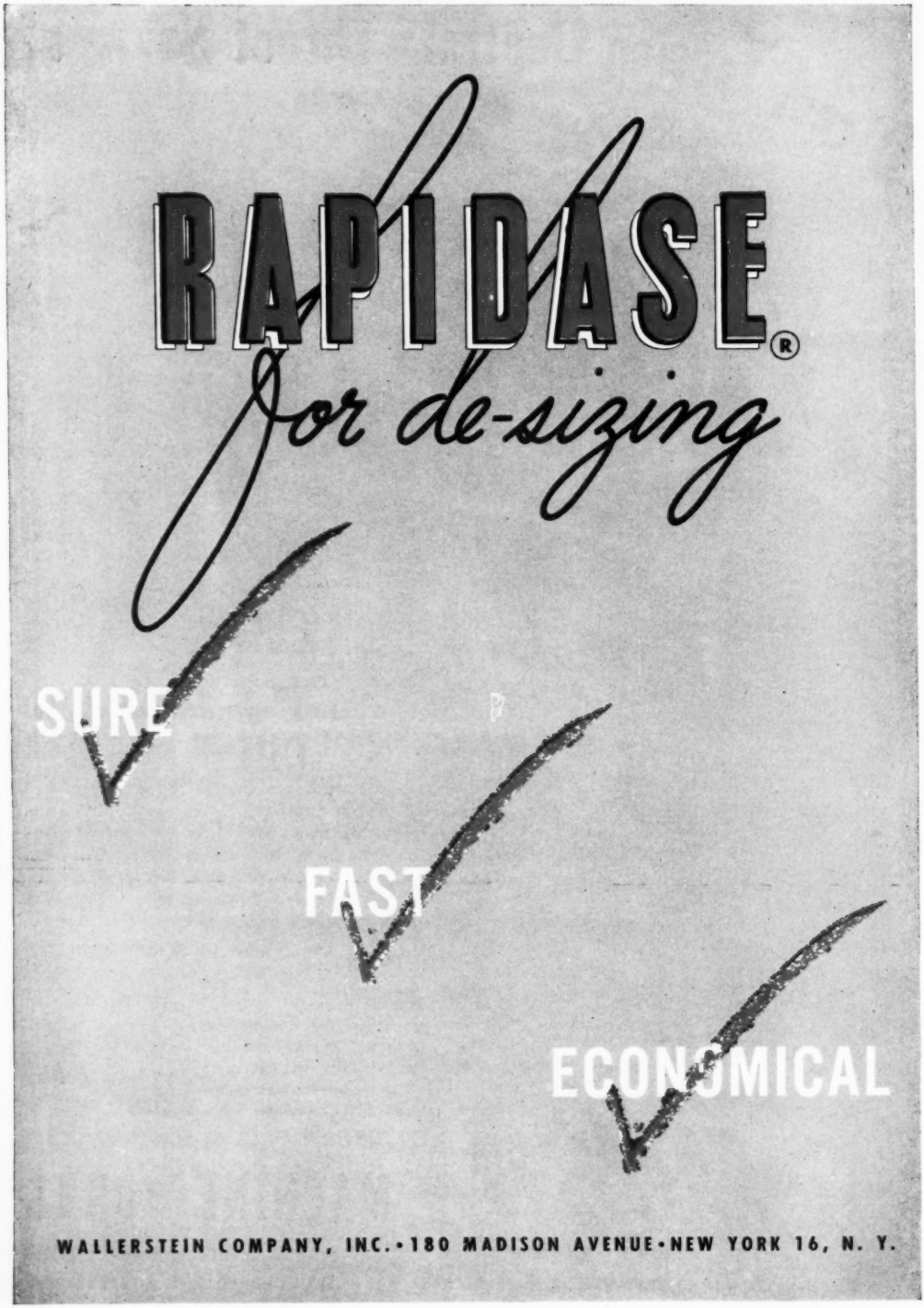
Other outstanding advantages of the Whitin Model "C3" include:

- **Electrical inching device**
- **Butted or leaded needle bars (optional)**
- **Non-reversing quick stop control**
- **Needle-down-position stop unit**
- **Large diameter bakelite cam followers**
- **Center-mounted tachometer and rack counter**
- **High beam location permits easy accessibility to cam shaft**

**Whitin MACHINE WORKS**

**WHITINSVILLE, MASSACHUSETTS**

**CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.**


RAPIDASE®
for de-sizing
SURE
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ECONOMICAL
WALLERSTEIN COMPANY, INC. • 180 MADISON AVENUE • NEW YORK 16, N. Y.

## How Cotton Mills May Increase Production— Lower Costs Per Loom Production

When asked how they were increasing production and lowering costs on their belt driven looms, many mill superintendents reported, "through the use of Tannate flat leather belting." They have found that Tannate is much stronger, that it delivers maximum but uniform power to looms and other machines. Because of its high overload capacity, Tannate operates on a continuous production run. It requires less maintenance, less adjustment. These advantages are the result of the special Rhoads tanning process that strengthens and cultivates the natural characteristics of leather. Special emphasis is also given to subsequent treatments. The end result is a belt that transmits power at 97 to 99% of efficiency over a wide range of tensions. All this adds up to more yarn, more cloth at lower cost.

### L. H. Schwoebel-Rhoad's Rep.

***"Sees great future for Bicut"***

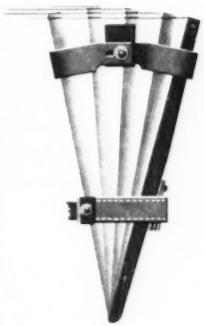
L. H. Schwoebel has represented J. E. Rhoads & Sons for the past 30 years. Like all Rhoads direct factory representatives, Lou Schwoebel is a specialist in leather. In addition, his experience in the textile field has enabled him to assist mill men in boosting efficiency and lowering costs through the proper selection and application of textile leathers.

### New Folder Describes Bicut and other Straps

Here is a handy file folder in which you'll find the specifications for all Rhoads Industrial Leather products, including leather belting and textile straps. Write for your free file folder to J. E. Rhoads & Sons, 35 N. Sixth Street, Philadelphia 6, Pa.

# NOW...

# RHOADS Bicut* Check Straps with the NEW Satin Finish



*Now . . . you can actually see and feel the finer qualities of the new satin finished Bicut Check Strap!*

Unlike the conventional hair-on strap, Rhoads Bicut Check Strap has no hair to wear off and get into the cloth being woven. Its smoother surface, naturally, offers a better friction surface for more efficient checking. And, because many more leather fibres are compressed into the area designated by thickness specifications, Bicut is stronger—lasts 25% longer in loom hours! You may see, feel and test the new Bicut Check Strap by contacting your Rhoads sales engineer. Bicut Straps are available in a variety of weights to suit the width of your looms and the fabric being woven.

*Trade Mark Reg

**250**

J. E. **RHOADS** & SONS

ATLANTA · PHILADELPHIA · NEW YORK · CHICAGO

**YEARS PRODUCING FINE LEATHER PRODUCTS**

# THE *Key* TO MODERN PRODUCTION...
## FROM OLD SPINNING AND TWISTING FRAMES

SCORES of mills have found that they can salvage millions of dollars in capital investment —and at the same time make their yarn output competitive in *quality*, *quantity*, and *cost*—by modernizing their band-driven or old-style tape-driven spinning and twisting frames with "Meadows Modernizers."

A typical Meadows "Conversion" consists in the installation of individual drive pulleys, ball bearing tape tension pulleys, aluminum alloy separators, silent chain drive, and high-strength polished and ground steel shafting, mounted on heavy-duty, self aligning ball-bearings.

The result is lower power consumption, even tension at all times, a more uniform speed and twist, fewer ends down, and increased yarn production . . . at far less than the capital investment cost of new frames. Can be easily and quickly installed. Write or call us for estimate and particulars.

**MEADOWS CONVERSIONS**

**MEADOWS MANUFACTURING COMPANY • ATLANTA, GEORGIA**

*Representatives:*

**JAMES P. COLEMAN**
P.O. Box 1351
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**COLEMAN-ROWE, INC.**
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# Do You Spin or Twist?

## THEN YOU SURELY NEED

# HERR CONICAL RINGS

- **Stops Yarn Breakage**
- **Permits Heavier Doffs**
- **Keeps Yarn Cleaner**
- **Produces Smoother Yarn**

*Each textile fiber shown above presents wonderful opportunities — each has special characteristics and handles differently.*

Ask us how yarn tension uniformity is controlled with the Herr Conical Ring... How we reduce ends down... How controlled lubrication affects cleanliness.

You can adapt your equipment for any textile fiber or blend if you use Herr Conical Rings.

*Ask for help on your problem.*

Gentlemen:
Please send literature on Herr Conical Rings and Herr Flyers.
Name .....
Position .....
Company address .....
Our problem is .....

**HERR MANUFACTURING CO., INC.**
**310 FRANKLIN STREET, BUFFALO 2, NEW YORK**

# Two "Problem" Wastes Become a Neutral Effluent

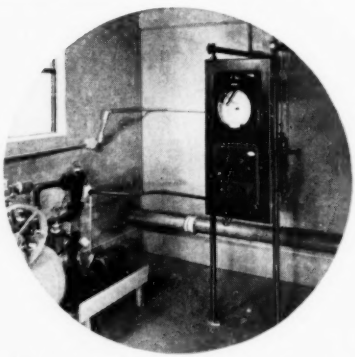
## ...under Foxboro pH Control

▲ *Equalization tanks store acids and alkalies before they are introduced into mixing basin at Mansfield Bleachery.*

At the Mansfield Bleachery, acid and alkali plant wastes are collected in separate equalization tanks. No mixing problem exists, however, since Foxboro pH Control permits combining the two wastes in correct proportions before disposal . . . and a neutral effluent is constantly maintained.

The complete reliability of this Foxboro Control System is evidenced by the fact that biological growths remain hale and hearty when the effluent is further treated on trickling filters. Since the system was installed, biological activity has never been impaired by unbalanced pH.

This is but one example of many industrial waste problems which are successfully solved with Foxboro Control. Whatever your waste disposal problem, Foxboro Instruments properly applied can be counted on to reduce both initial investment and operating costs. Talk it over with your nearest Foxboro representative, or write **The Foxboro Company, 487 Neponset Ave., Foxboro, Mass., U.S.A.**



▲ *Foxboro pH Controller in pump house at Mansfield Bleachery regulates flows into the mixing basin.*

**FOXBORO** Reg U S Pat Off. **pH CONTROLLERS**

# POWELL gives you flow control at its best!

Advanced engineering, laboratory control of all materials, expert workmanship and over a century of manufacturing experience make Powell Valves what they are today — flow control equipment at its best.

And because they are made to suit the service, there are more kinds of Powell Valves in use today than of any other individual make.

**The Wm. Powell Company**
Cincinnati 22, Ohio

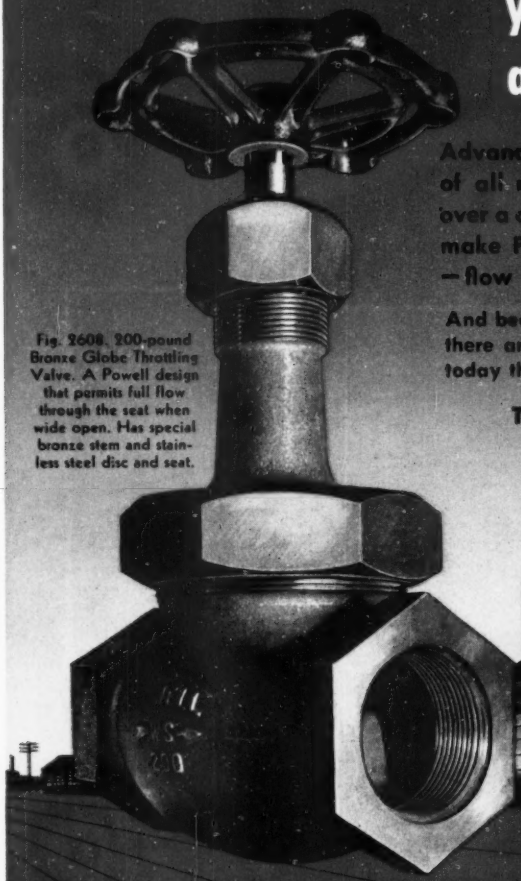
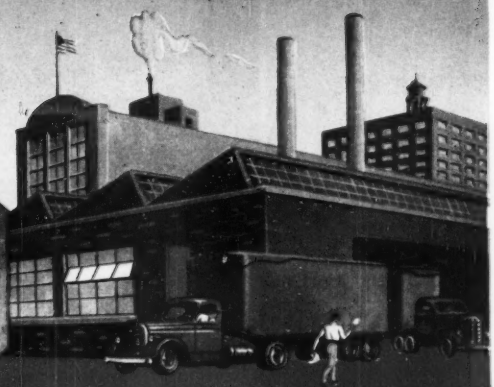


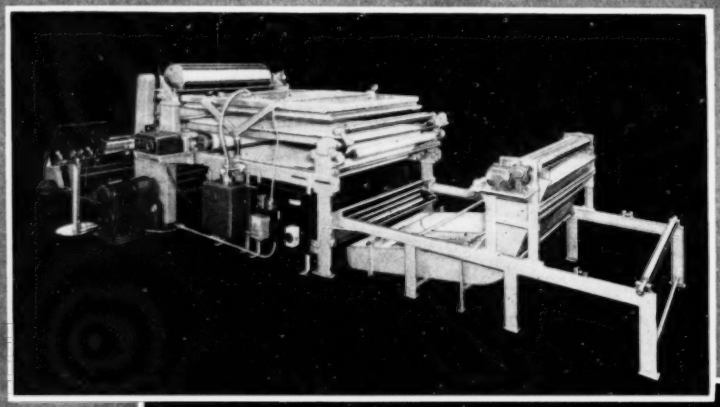
Fig. 2608. 200-pound Bronze Globe Throttling Valve. A Powell design that permits full flow through the seat when wide open. Has special bronze stem and stainless steel disc and seat.

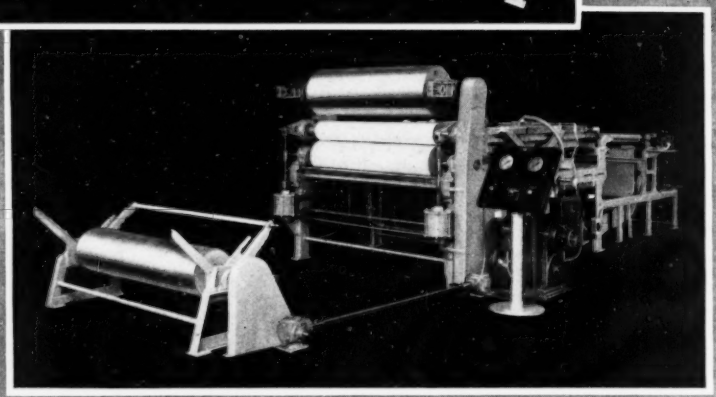


# POWELL

BRONZE, IRON, STEEL AND CORROSION-RESISTING VALVES

DEPENDABLE VALVES SINCE 1846





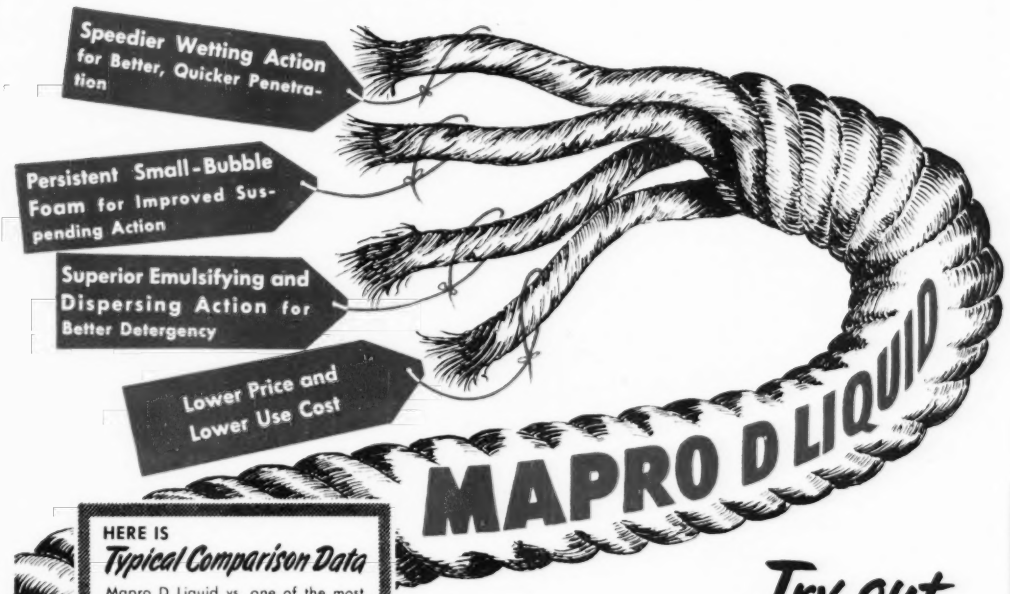
The Perkins Vinyl Embossing Machine produces quality roll embossing. This unit is engineered and built to meet exactly the requirements of the plastic converting industry, economically, in fine detail.

And . . . the Perkins Vinyl Embossing Machine is readily adaptable to use your existing rolls.

# B. F. PERKINS & SON, Inc.

HOLYOKE, MASS., U.S.A.

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

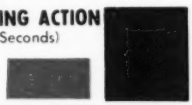

Speedier Wetting Action for Better, Quicker Penetration
Persistent Small-Bubble Foam for Improved Suspending Action
Superior Emulsifying and Dispersing Action for Better Detergency
Lower Price and Lower Use Cost
MAPRO D LIQUID

HERE IS

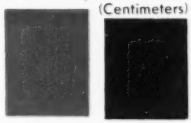
## *Typical Comparison Data*

Mapro D Liquid vs. one of the most commonly used detergents on the market.

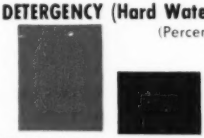
**WETTING ACTION** (Seconds)




**FOAMING (Hard Water)** (Centimeters)




**DETERGENCY (Hard Water)** (Percent)




# *Try out* Mapro D Liquid *for...*

- Scouring yarn and piece goods of cotton, rayon, acetate and mixed constructions.
- Dye assistance.
- Replacing soap in any textile operation.
- Wetting out, emulsifying and detergent operations.

## IT'S A BETTER DETERGENT AND IT COSTS LESS!

Mapro D Liquid in comparative tests with widely used detergents in common use today shows superior results in every phase of detergent activity. See the typical examples in the panel to the left. And Mapro D Liquid is priced below these other materials.

We'll gladly send a sample for tests . . . or, better still, arrange with you for a mill-scale run at your convenience.

onyx CHEMICALS FOR DYEING • FINISHING • PRINTING

**ONYX OIL & CHEMICAL COMPANY**
**TEXTILE DIVISION**
**WARREN & MORRIS STS., JERSEY CITY 2, N. J.**
**CHICAGO • BOSTON • CHARLOTTE • ATLANTA**

*In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, Toronto, St. Johns, Que.* *For Export: Onyx International, Jersey City 2, N. J.*

## KEEPS MILL VILLAGE INTERIORS

# *Beautiful... Longer*

**That Means Lower Maintenance Costs**

***Here's why!*** QUALI-KOTE is a *brand new,* fast-drying commercial wall paint especially developed for: (1) *Easy application;* (2) Exceptional *durability;* (3) Repeated *washing;* (4) *Lasting,* velvet-like beauty!

QUALI-KOTE cuts decorating costs by reducing application time. It comes ready to use . . . flows on smoothly and easily. It dries to touch in only one hour . . . means less inconvenience to tenants!

QUALI-KOTE *reduces cost of upkeep* because it hardens to a tough, nonporous film that actually resists dirt and wear! When QUALI-KOTE is thoroughly cured, it will withstand repeated washing . . . without disturbing its color or finish. QUALI-KOTE maintains beauty . . . *puts off* early repainting!

Let us show you QUALI-KOTE'S outstanding economy features . . . its 16 authentic colors and white; features and colors that give tenants new pride in their homes . . . give you an *actual saving!*

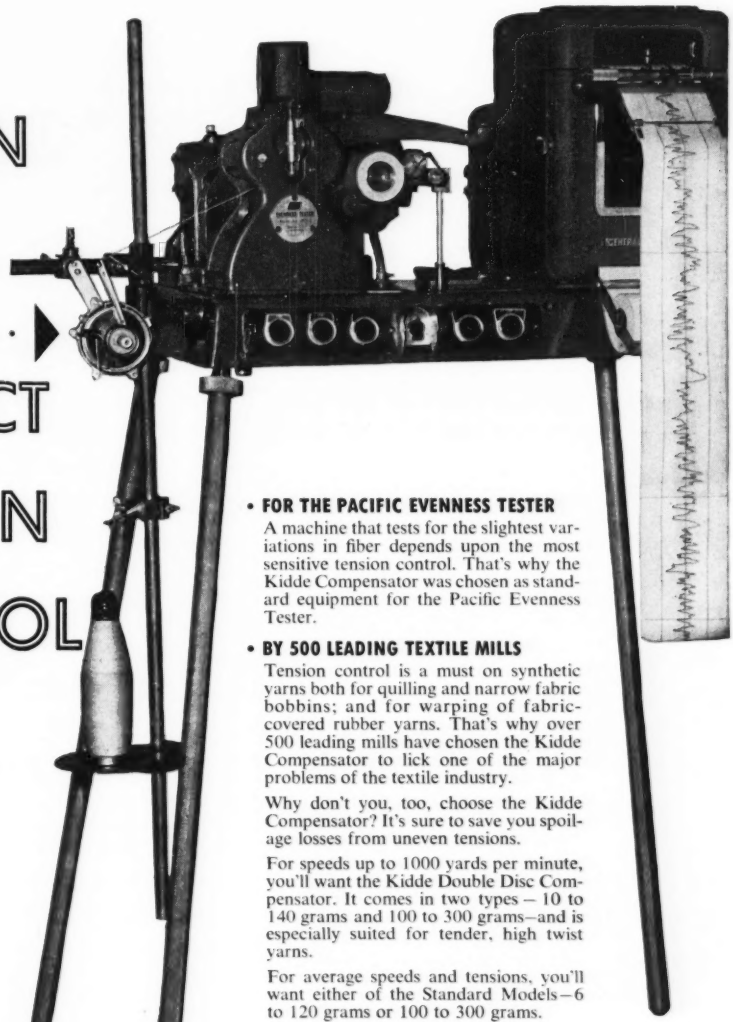
Write The Sherwin-Williams Co., Cleveland 1, Ohio. (Division Office, Charlotte, N. C.)

## SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES • MILL VILLAGE PAINTS

# CHOSEN FOR PERFECT TENSION CONTROL



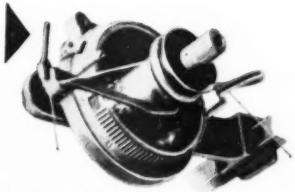
- **FOR THE PACIFIC EVENNESS TESTER**
  A machine that tests for the slightest variations in fiber depends upon the most sensitive tension control. That's why the Kidde Compensator was chosen as standard equipment for the Pacific Evenness Tester.
- **BY 500 LEADING TEXTILE MILLS**
  Tension control is a must on synthetic yarns both for quilling and narrow fabric bobbins; and for warping of fabric-covered rubber yarns. That's why over 500 leading mills have chosen the Kidde Compensator to lick one of the major problems of the textile industry.

Why don't you, too, choose the Kidde Compensator? It's sure to save you spoilage losses from uneven tensions.

For speeds up to 1000 yards per minute, you'll want the Kidde Double Disc Compensator. It comes in two types – 10 to 140 grams and 100 to 300 grams–and is especially suited for tender, high twist yarns.

For average speeds and tensions, you'll want either of the Standard Models–6 to 120 grams or 100 to 300 grams.

Write today for full information.



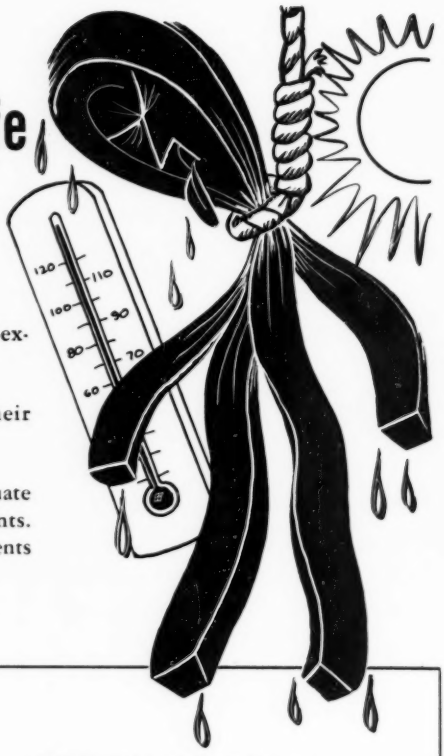
Standard Model
6 to 120 grams
100 to 300 grams

**Kidde**

**Walter Kidde & Company, Inc.**
**790 Main Street, Belleville 9, N. J.**

# How to get More Life out of V-Belts

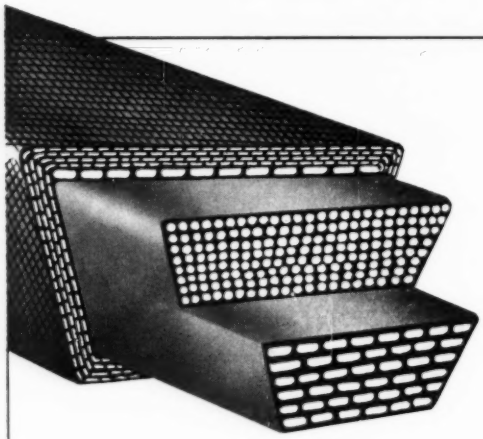
**(STORAGE)**




**DON'T** store V-Belts in a hot dry room or expose to the direct rays of the sun.

**DON'T** hang belts in such a way that their shape will be distorted.

**DO** specify and store *Bull Dog V-Belts* in adequate supply for your normal replacement requirements. With Bull Dogs on the job "normal" replacements are few and far between.



Your BWH distributor will be glad to show you how Bull Dog V-Belts have the covers, the cords and the compounds to cut *your* belting costs. Call him today.

## HERE'S WHY

Their DURABLE COVERS withstand the severe wearing action of the sheave while sealing the belt against grease, dirt, moisture.

There's MINIMUM STRETCH due to a new, exclusive technique which results in fewer takeup adjustments, reduced slippage, longer belt life.

There's a STRONG, SPECIALLY ENGINEERED CORD SECTION with high tensile strength, increased load carrying capacity, ability to absorb shock loads.

The belt TAKES HEAVIEST FLEXING because BWH quality-controlled compounds run cooler and do not crack or deteriorate under severe flexing.

BWH
DEPENDABLE RUGGEDNESS

*Another Quality Product of*

**BOSTON WOVEN HOSE & RUBBER COMPANY**

Warehouse Stock: 111 N. Canal St., Chicago, Illinois **Distributors in all Principal Cities**

PLANT: CAMBRIDGE, MASS. • P. O. BOX 1071, BOSTON 3, MASS., U. S. A.

## for practically every phase of

# TEXTILE PROCESSING

HARTOPON is an entirely new development in synthetic detergents. It is a pure white product recommended for use in virtually all cleaning operations such as the scouring of silk, cotton, rayon, acetate, wool, nylon, Orlon and Dacron.

HARTOPON is unsurpassed for jig and box type scouring, kier boiling, soaping off prints, and for removal of sizing, oils and dirt.

HARTOPON is effective in very low concentrations, cleans thoroughly and rinses rapidly and completely in hard or soft water. Its low cost, high activity and wide range of uses make HARTOPON an unusually economical, all-purpose detergent for scouring operations.

## THE HART PRODUCTS CORPORATION

**1440 BROADWAY • NEW YORK 18, N. Y.**

Works and Laboratories: Jersey City, N. J. • The Hart Products Company of Canada, Ltd., Guelph, Ontario

# TEXTILE BANKING COMPANY

Inc.

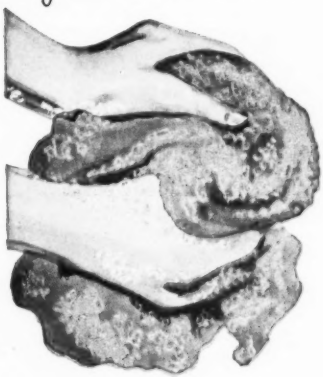
*Factoring Service*

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

# *KERANOL nk®

gives woolens, cottons and rayons a very desireable, soft full hand...



***Durable to Washing and Dry Cleaning**

Your woolen, cotton and rayon fabrics finished with KERANOL N K will have a truly mellow, glove-like hand, durable to washing and dry cleaning. KERANOL N K is unaffected by variable pH values, so may be used with greatest efficiency in neutral, alkaline or acid baths.

*Mail the coupon for further information.*

*Additional – and highly valuable – use of KERANOL N K: as a plasticizer and softener in conjunction with all types of resin finishes.*

*EXCELLENT RESISTANCE TO YELLOWING!*

**Arkansas Co. INC.**

*MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS NEWARK, NEW JERSEY*

**Arkansas Co., Inc.**
**P. O. Box 210**
**Newark, N. J.**

*Gentlemen:*
*Please send, without obligation:*

- ☐ full details on KERANOL N K
- ☐ sample and application procedure
- ☐ please have representative call

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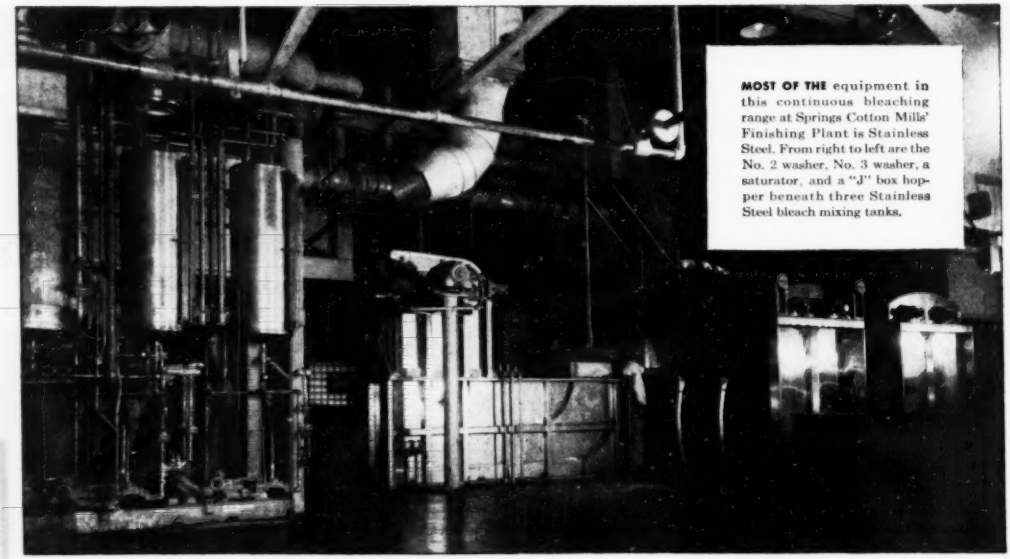
FIRM NAME_____

ADDRESS_____

CITY_____ STATE_____

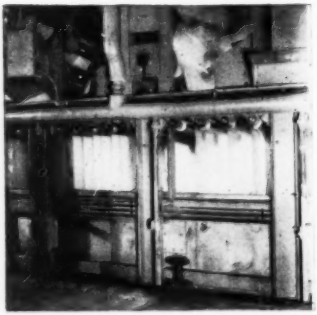
3-7-2



**MOST OF THE** equipment in this continuous bleaching range at Springs Cotton Mills' Finishing Plant is Stainless Steel. From right to left are the No. 2 washer, No. 3 washer, a saturator, and a "J" box hopper beneath three Stainless Steel bleach mixing tanks.

# Stainless Steel is the major material

## IN ONE OF THE SOUTH'S NEWEST AND MOST MODERN FABRIC FINISHING PLANTS



**TWO OF THE FIVE** compartments in the open-width final washer are shown here. Fabric comes out of them with less than .1% caustic soda. Stainless Steel top rolls and squeeze rolls can be seen here. This equipment was built by Greenville Steel & Foundry Co., Greenville, S. C.

DESIGNED and built specifically for fabric finishing operations, this four-year-old plant of Springs Cotton Mills in Grace, S. C., is one of the newest and most modern operations of its type in the South. And a major part of its equipment is made of the most modern material available—Stainless Steel.

A Stainless Steel continuous bleaching range makes possible continuous high-speed processing of fabrics. Cloth travels through the mill at speeds of 175 to 265 yards per minute. In this range are five Rodney Hunt Tensitrol® Rope Washers which are 90% Stainless Steel, two Stainless caustic saturators and two Stainless "J" boxes made by the Morrison Machine Co., Paterson, N. J. Piping and bleach mixing tanks are also Stainless.

Mercerizing makes use of a high percentage of Stainless equipment, too. In the three mercerizers, wash boxes, roll and cloth straighteners are principally Stainless Steel. Dry cans on a 25-can dryer, made by the Morrison Machine Company, cooling cans and scrimp rolls are Stainless, too.

Final washing makes use of five Stainless wash boxes, with Stainless baffles and guide rolls.

Stainless Steel's smooth, durable surface, combined with its resistance to corrosion and freedom from product contamination, have made this steel the key material today in textile wet processing.

For the best results from Stainless Steel equipment, make sure that your equipment fabricator uses U·S·S Stainless Steel.

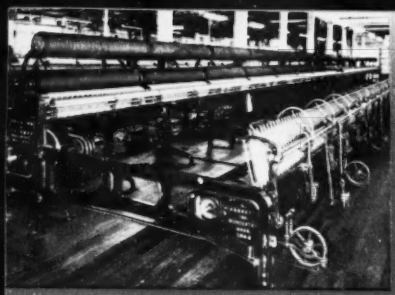
UNITED STATES STEEL COMPANY, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

# U·S·S STAINLESS STEEL

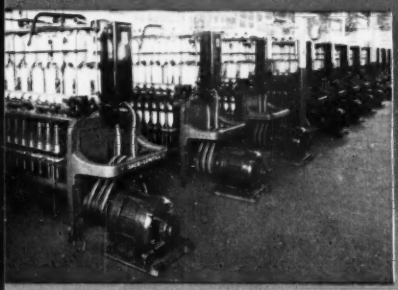
SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

2-499

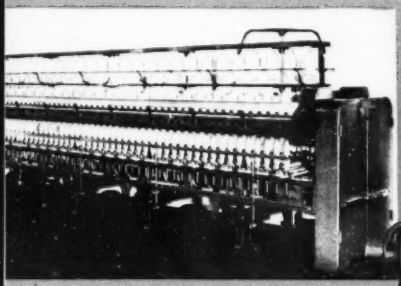
UNITED STATES STEEL



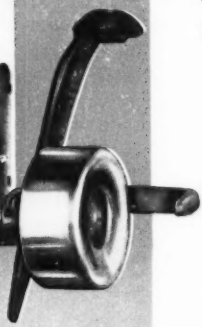
Johnson & Bassett Spinning Mule with Fafnir Ball Bearing equipped Spinning Spindles

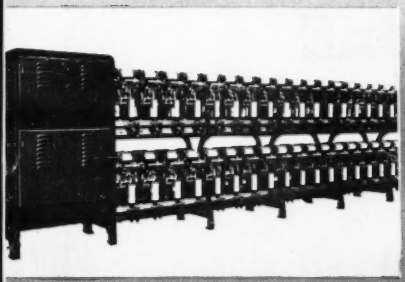


Saco-Lowell Spinning Frames with Fafnir Cylinder Units



Whitin F-2 Spinning Frame with Fafnir equipped Tension Pulleys





U. S. Textile Face Drive Double Deck Twister using Fafnir Piya-Seal Ball Bearings

# TURNING POINTS

## to increased production

## in Spinning and Twisting

If you stop to consider the great number of turning points on machines for spinning and twisting, you'll understand how bearings with low co-efficients of friction can make these machines more productive. Comparative tests for example, have shown that a frame equipped with Fafnir ball bearings was ready to doff fully five minutes before the plain bearing frames. In combination with the reduction of lost time for servicing and repairs, this speed-up meant many more productive hours.

In spinning and twisting there are more varieties of Fafnir ball bearings and ball bearing units used than in any other process. They are universally known for their simple, quick installation on all types of machines. Many of these units have the famous Fafnir Wide Inner Ring Ball Bearing with self-locking collar . . . easiest of all to install.

Your most economical way to get increased production may be represented by Fafnir Textile Ball Bearing Units. Why not send for a descriptive catalog? The Fafnir Bearing Company, New Britain, Conn.

**A few of the applications incorporating FAFNIR BALL BEARINGS for Spinning and Twisting**

- Back Idlers with Fafnir Piya-Seal Ball Bearings
- Cylinder Bearing Replacement Units
- Upstroke Twister Idlers
- Tape Tension Pulleys
- Spindles (spinning and twisting)
- Cam Shafts
- Jack or Intermediate Gear
- Take-up Rolls
- Cross Shafts

# FAFNIR

## BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

**Complete Blending, Opening, Cleaning and Picking Systems for Cotton Mills**

**Opening, Blending and Picking Systems for Synthetic Fibers**

**New, and Rebuilt, Single-Process Pickers**

The Aldrich Synchronized Single Process Picking System has consistently produced more uniform card sliver than any other picking system.

**Parts for Kitson Pickers Always in Stock for Immediate Delivery**

**AldricH MachinE WorkS**

Greenwood, South Carolina

# Teamwork

Soaring through space with competent ease, a highly trained team on the flying trapeze. Teamwork counts — under the "big-top" — in industry.

What can we do to help insure the future of your business? That's what Butterworth engineers have been asking for 131 years — the question has special meaning today.

Thinking of new machines? We will do the utmost to meet your requirements, within the limits of our metal allotments. Making long range plans? Our engineers are at your service. Even now they are teamed with many of America's leading mills, thinking of the years ahead and planning with them to maintain their competitive position.

Butterworth service is offered too, to help your wet finishing department get the most out of what you now have — to keep equipment at peak efficiency. It may be only a spare part you need — but if you need it in a hurry, you'll get it in a hurry if it is humanly possible.

A letter, a wire or a phone call will put a Butterworth engineer on your team.

H. W. BUTTERWORTH & SONS COMPANY

Bethayres, Pennsylvania

1211 Johnston Bldg., Charlotte, N.C. • 187 Westminster St., Providence, R.I.

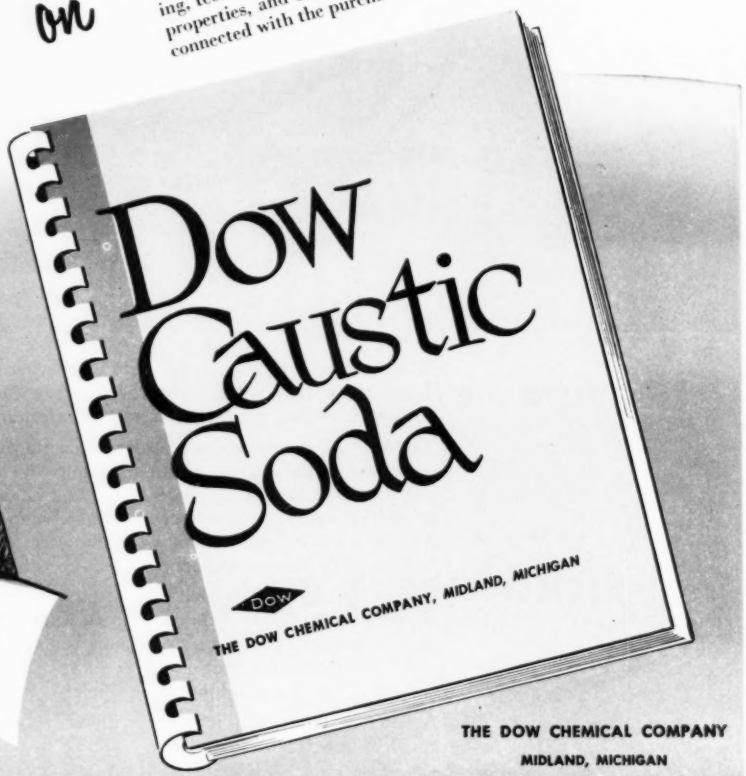
Machines for Bleaching, Boiling-Out, Mercerizing, Dyeing, Finishing and Embossing : : Pot Spinning Machines for Synthetic Fibers
Calender Rolls : : Tenter Chains

# BUTTERWORTH

at your request...

a new, revised handbook on

Here it is—just as you requested—the latest book of its kind covering all phases of caustic soda. It discusses in detail the forms and grades of caustic soda, methods of handling and storing, technical data, methods of analysis, chemical and physical properties, and other phases of interest to anyone in any way connected with the purchasing, use or handling of caustic soda.

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MIDLAND, MICHIGAN

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CHEMICALS
INDISPENSABLE TO INDUSTRY AND AGRICULTURE

NUMBER 5 OF A SERIES

# How Gulf Periodic Consultation Service helps textile mills cut maintenance costs

## PERIODIC SERVICE CALLS KEEP PROGRAM CONTINUOUS AND UP TO DATE

When you adopt Gulf Periodic Consultation Service, Gulf Sales and Staff Engineers will help you set up a complete lubrication program—the kind of a program that has reduced maintenance costs in scores of mills.

These trained specialists will survey your equipment, provide simplified charts with practical lubricant recommendations, and suggest better application methods. They will also provide expert assistance on special problems that involve lubricants or lubrication.

Then, to keep the program up to date, they will make periodic service calls at your mill. On the occasion of these calls, they will note changed operating conditions that might affect the lubrication program. They will advise you regarding new developments in lubrication practice. And they will look for further means of reducing costs through improved lubrication.

Mail the coupon below for additional information on this cooperative plan. Or contact your nearest Gulf office.

GULF SERVES INDUSTRY

Gulf Oil Corporation · Gulf Refining Company TI
719 Gulf Building, Pittsburgh 30, Pa.

Please send me, without obligation, a copy of the booklet "Gulf Periodic Consultation Service."

Name .....

Company .....

Title .....

Address .....

# *"...On the feet of Individuals."*

Society advances on the feet of individuals. We Americans live under the highest standard ever achieved because we believe in and are permitted currently to practice three of the cardinal principles of progress—Invention, Research and COMPETITION.

Nineteen basic inventions influence our pattern of life today. Each one was created to satisfy a fundamental need for improvement—a modern means of competing as against outmoded procedure. Each one, such as the electric light, the telegraph, the amplifying tube, the induction motor, created a new industry in which numerous companies strove in free competition for the maximum share of business.

For example, since Thomas Edison invented the incandescent filament lamp in 1880, the electric light industry has grown to an annual volume of $501,500,000 in light bulbs alone; in May, 1906 the Wright Brothers received the patent for their flying machine; the value of aviation manufactures in 1951 in the United States alone was estimated at $3,350,000,000 and in February, 1952, records show a $10½ billion backlog of orders.

More rapid still is the growth of the radio-television industry which today produces some $230 million worth of home radio sets and $1,570,800,000 in television sets. In every case, employment and sales volume grew enormously and the public enjoyed huge personal benefits.

Side by side with Invention came Research, exemplified by the competition of intelligent men questing for new materials, new methods, new processes, new scientific truths. Current advertisements tell of hundred-year tests to assure better materials for the future, technology that produces metals to withstand almost inconceivable heat, machines calculating 20,000 times faster than the mind of man, medicines that cure "incurable" diseases, food processes that cook, sterilize and pack hundreds of cans a minute. And in every case, the public enjoys huge personal benefits.

This is what James A. Decker undoubtedly had in mind when he wrote the line, "Society advances on the feet of individuals." These "individuals" are you and I, all our countrymen, benefiting every day from Invention, Research—and from COMPETITION.

Developing inventions, marketing products, and pursuing scientific research require substantial investments. A grave danger to their future now looms. In 1951, corporation net profits suffered a loss of 21% over the previous year. The reason—taxes too high, government controls and policies that interfere too greatly with private industry. If this continues, financial resources will dwindle, competition will be stifled.

Without free competition, American progress stops. No country can long exist when its government calls all the shots. We need competition to assure progress for people.

★ ★ ★

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**THE COMPETITIVE SYSTEM DELIVERS THE MOST TO THE GREATEST NUMBER OF PEOPLE**

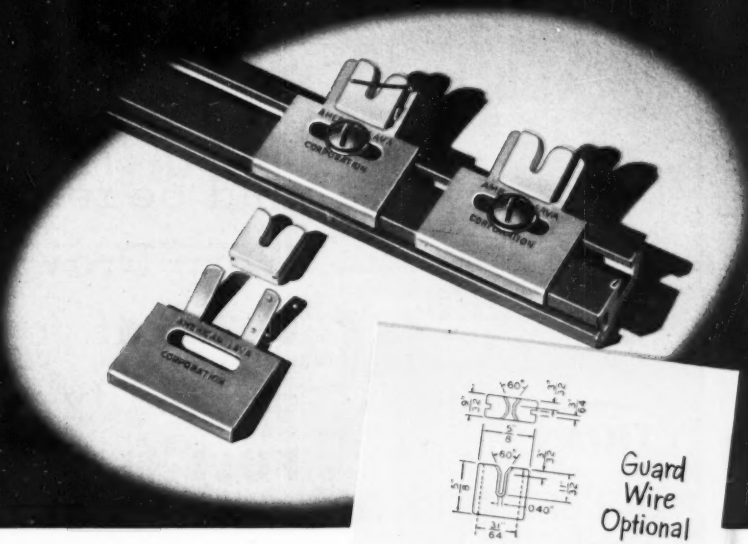
**ALSIMAG THREAD GUIDE NO. GS-20201**
*(Guides and holders on bar)*

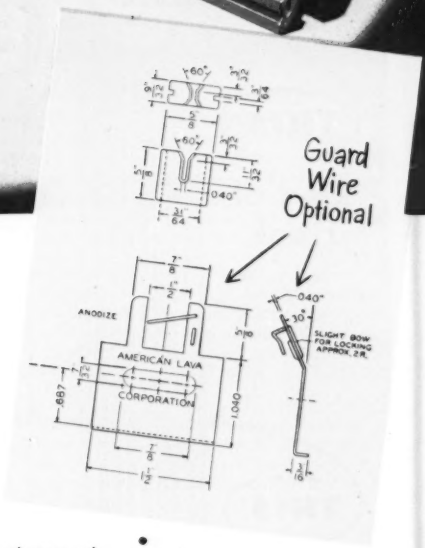
**ANODIZED ALUMINUM HOLDERS**

**Part No. 20201-G (no guard wire)**

**Part No. 20201-H (with guard wire to keep the yarn from jumping out.)**

**Above holders fit the metal rail of ATWOOD MODEL 110 UP-TWISTER. Other holders are available to fit the rails of other makes of winders, spinners, redraws and up-twisters.**






# ALSIMAG® WINDER, SPINNER, REDRAW AND UP-TWISTER GUIDES

## FEATURE:

**LONG LIFE:** AlSiMag guides are hard, homogeneous. According to records from many mills, these guides will give you at least 10 times the service of any other make of guide.

**FEWER BROKEN FILAMENTS:** No surface "skin" to wear through. Wear is very gradual, simply reveals new surfaces of the same character as the original. No sharp edges to cause undetected yarn damage.

**EASY TO INSTALL:** These anodized aluminum holders with Screw slots that permit adjustment are available to fit the bars of several makes of machines.

**EASY, QUICK CLEANING:** Guides are lifted out of holders, cleaned, pressed back in position. Slight bow in top of holder holds guide firmly in position.

**LESS DOWN TIME:** Quickly, permanently installed. Guides lift out for fast cleaning.

**MORE UNIFORM TENSION:** AlSiMag guides are uniform physically and dimensionally. Available in High Polish or Satin finish. BETTER PACKAGE UNIFORMITY is the obvious result.

**LOWEST COST** per pound of yarn processed. Mill records indicate that this guide will do a better job for you and at LESS THAN 10% OF YOUR FORMER GUIDE COST.

The dimensional drawing above shows construction. Note oblong screw slot for easy adjustment and positioning. Slight bow in top area of holder permits guide to be quickly removed, cleaned and replaced.

### TEST SAMPLES ON REQUEST

Our statements about these guides sound pretty enthusiastic but your own tests will prove that they are conservative. Test samples without charge. Tell us what machine you'll use them on so we can be sure to send you the right holders to fit it.

**50TH YEAR** OF CERAMIC LEADERSHIP

## AMERICAN LAVA CORPORATION

**CHATTANOOGA 5, TENNESSEE**

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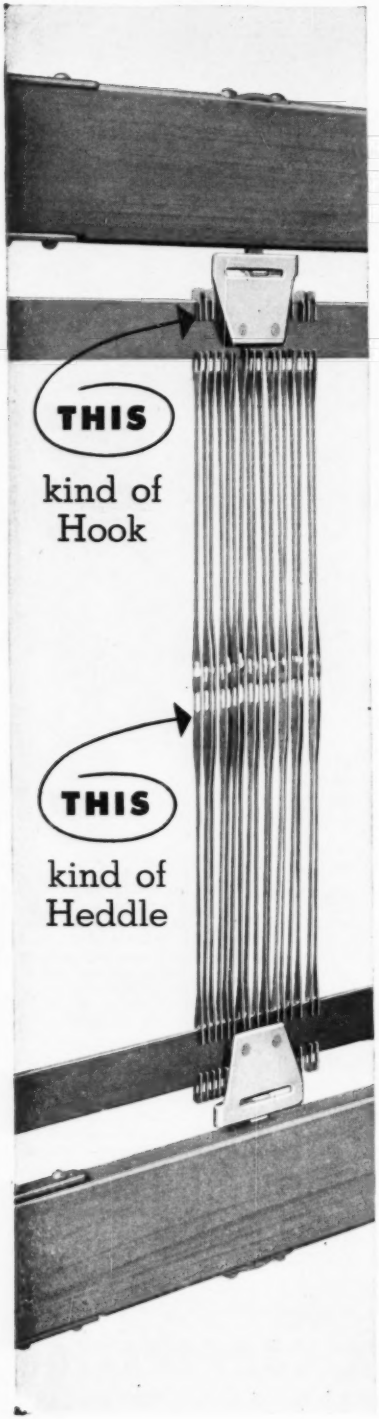
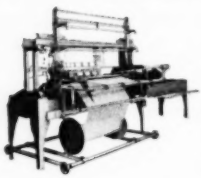



# You can improve your weaving **NOW** and be ready for a Warp Drawing Machine **LATER** if you will gradually re-equip with **FULL-FLOATING** type Harness Frames and key-hole type Heddles...

The Barber-Colman Warp Drawing Machine requires equipping your looms with harness having steel heddles of the type shown here, in order that the selecting mechanism may properly position the correct heddle eye for each drawing-in needle stroke. Also, these harness must have support bar hooks of the type shown, in order that the heddles may move freely the full length of the frame. The machine holds the heddles in a group, setting them off at proper intervals as each is drawn. This full-floating construction *improves weaving immediately* by removing restrictions and permitting each heddle to find its proper in-line position in the frame.

Now, the cost of such harness may amount to more than the cost of the Warp Drawing Machine. This should not discourage consideration of the machine, in view of the advantages of substantial cost savings in warp preparation. Since you are replacing heddles and harness frames frequently and constantly as they wear out — why not start *now* to replace with the type that can be used on a Barber-Colman Warp Drawing Machine? Then, when you are ready for the machine, the problem of special harness will have been solved. For details in connection with such a program, we suggest you consult your Barber-Colman representative.



Automatic Spoolers • Super-Speed Warpers • Warp Tying Machines • Drawing-In Machines

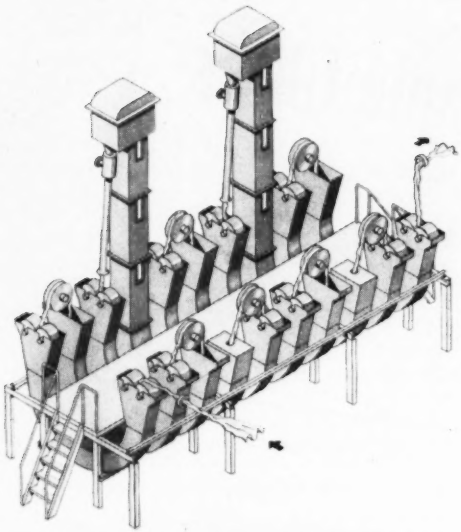
**BARBER-COLMAN COMPANY**

**ROCKFORD, ILLINOIS, U. S. A.**

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A.

MANCHESTER, ENGLAND • MUNICH, GERMANY

# NOW! A NEW CONTINUOUS BLEACHING SYSTEM AT A NEW LOW COST!



## DU PONT CONTINUOUS PEROXIDE BLEACHING SYSTEM TYPE 1000

Capacity . . . . . 750 to 1500 lbs./hr.
Speed . . . . . to 100 yards/minute

**NOTE:** The equipment illustrated above, which can be used in the Type 1000 System, is designed and sold by H. W. Butterworth & Sons Co., Bethayres, Pa. Other manufacturers also supply equipment for this system.

**The Du Pont Type 1000 Continuous Bleaching System** is an all-new peroxide bleaching system based upon time-proven bleaching principles. Designed specifically for plants processing from 750 to 1500 lbs. of cloth per hour on a full-production or specialty basis, the new system employs a compact two-stage bleaching range which is basically simple in design and construction . . . can be installed and operated at a surprisingly low cost. Here are the benefits the new system can bring to your bleaching operations:

**NEW ECONOMY** . . . Bleaching equipment is priced so low that it can usually pay for itself within two years through reduced operating cost and increased production.

**NEW CAPACITY** . . . With a capacity of 750-1500 lbs. of cloth hr., the Type 1000 System meets the requirements of large mills for specialty work . . . is adequate for total production in many smaller mills. Cloth speed is up to 100 yds./minute. Goods in the 3-7 yds./lb. class can be handled.

**NEW EFFICIENCY** . . . The new system produces maximum yardage at lowest possible cost. Chemical and steam consumption are lowered by as much as 40%. One-man operation means exceptional savings in labor costs.

**NEW QUALITY** . . . Automatic operation permits close control of chemicals, steam and cloth speed. Because the system is continuous, every yard of cloth receives the same bleaching treatment for same length of time—resulting in finished goods of high uniformity and quality.

### SEND FOR THIS FREE BOOKLET!

It gives you complete information about the Type 1000 System . . . describes advantages, applications, steps of operation and equipment design. Send in the coupon below for your copy.

## DU PONT PEROXIDES
### *FOR TEXTILE BLEACHING*

Available in drums and tank cars { "Albone" 35 . . . Hydrogen Peroxide, 35% / "Albone" 50 . . . Hydrogen Peroxide, 50%

DU PONT

*150th Anniversary*

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Delaware

Please send me your new free booklet which completely describes the new Du Pont Type 1000 Bleaching System.

*Name*_____ *Position*_____

*Firm*_____

*Street & No.*_____

*City*_____ *State*_____

*Now an Important Part of the American Market*

# Thomas Hodges Corp.

**OFFERS**

# yarns and staple fibres

**PRODUCED BY**

# Farbenfabriken Bayer

**(FORMERLY I. G. FARBEN)**

## *Nylon*

**(PERLON)**
**POLYAMIDE FIBRE**

**30 DAY DELIVERY**

1½-20 denier
1½" to 6" staple cuts. Bright, dull, extra-dull. Natural and 28 stock dyed colors.
TOW: 2.75 to 6 denier—
100,000 aggregate denier.
Filament Yarn 1800 denier and up.

## *Cuprama*

**RAYON STAPLE FIBRE**

**The most wool-like fibre from a cellulose base available anywhere in the world. Feels like wool! Looks like wool! Spins like wool!**

**3 WEEK DELIVERY**

1½-20 denier
1½" to 6" staple cuts. Natural or dope dyed (solution dyed) in 28 colors. Any shade in 5 ton minimum lots.

## *Cupresa*

**CONTINUOUS FILAMENT CUPRAMMONIUM RAYON YARN**

25 - 150 denier.
Natural and dope dyed (solution dyed) in 28 colors. Any shade in 5 ton minimum lots.

*Reg. appl. for

Featuring
**CONTROLLED UNIFORMITY...**
for greater manufacturing efficiency and a better finished fabric.

**THOMAS HODGES CORPORATION**
11 W. 42nd St., New York. Tel. BR 9-1628-1629-1630
Warehouse, Box 86, Kearnysville, W. Va.

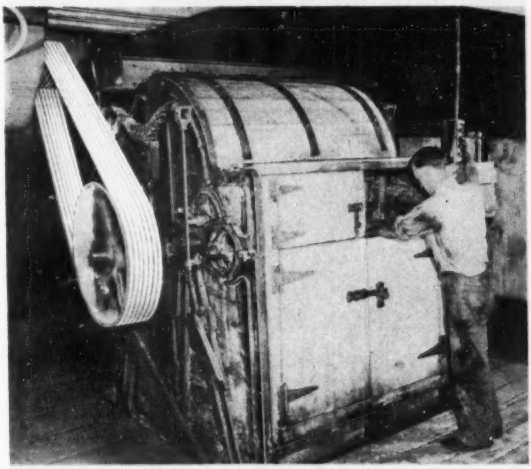
Sole sales representatives of Farbenfabriken Bayer (Formerly Famous I. G. Farben) Chemical Fibre Division

# How concave sides cut V-Belt costs

Important to anyone who wants to cut V-Belt replacement costs is the simple, interesting reason WHY Gates Vulco Ropes are built with *Concave Sides* (U. S. Patent 1813698). See Figure 1.

When a Gates belt is bent around a sheave these Concave Sides fill out to full, even contact with the sides of the sheave groove. (Figure 1A). This gives you sure pulling power. And, naturally, because wear is distributed evenly, the Concave Sides actually give you longer wear—longer belt life. That cuts V-Belt replacement costs.

On the other hand, when a straight sided V-Belt (Figure 2) is bent, the sides bulge out, preventing the belt from fitting evenly in the sheave groove. This causes *extra wear* at the points shown by arrows. (Figure 2A).



## Make this simple test yourself...

Hold a straight sided V-Belt as it would be bent around a sheave. Take the sides of the belt between your finger and thumb. You can *feel* the bulges in the sides—the bulges that prevent an even fit in the sheave groove and cause extra wear.

Now do the same thing with a Gates Vulco Rope. You can feel the sides fill out. You can see why they press firmly and evenly against the sides of the sheave groove—giving you longer belt life—lower belt costs.

When you buy V-Belts be sure to get Gates Vulco Ropes—the V-Belts with the Concave Sides.

Gates Engineering Offices and Jobber Stocks are located in all industrial centers of the United States and in 71 foreign countries.

### V-BELTS PERMIT SUDDEN STOPS

**When flat belt driven fulling mills at the Glen Woolen Mills, Norwich, Connecticut, had to be stopped suddenly, inertia caused overrun which often destroyed several yards of cloth.**

**Individual plug-stop motors connected by Gates Vulco Ropes now give smooth, almost instantaneous stops and practically no overrun.**

CS-526-D

Gates® VULCO ROPE DRIVES

THE GATES RUBBER COMPANY • DENVER, U.S.A.

**V-Belts — Hose Molded Rubber Goods for industry World's Largest Maker of V-Belts**

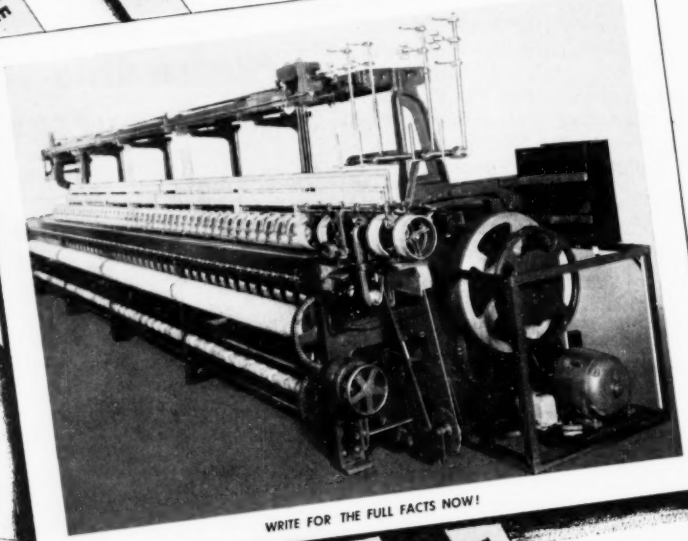
# C&K

*has designed ALL these features into this New Multiple-Shuttle Narrow-Fabric Loom*

LONG OR SHORT LOOM?....

ALL-METAL FRAME

NEW DRIVE



WRITE FOR THE FULL FACTS NOW!

LIGHT-METAL LAY

PRECISION C&K CONSTRUCTION

ELECTRICAL BRAKING

FOR HIGH SPEEDS

TAKE YOUR PICK!

VARIOUS LETOFFS AVAILABLE

HEAD MOTION OR DOBBY...

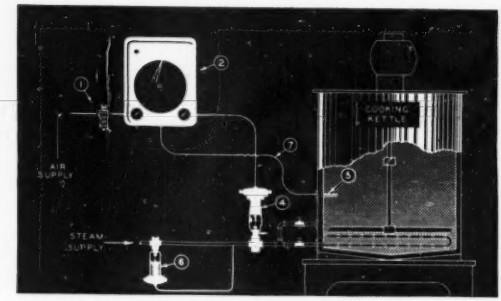
NEW END-CAM HARNESS MOTION

This invisible trademark stands back of the trademarks of the World's Finest Woven Fabrics

## *Crompton & Knowles* LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I. • CROMPTON & KNOWLES OF CANADA, LTD., MONTREAL, QUE.

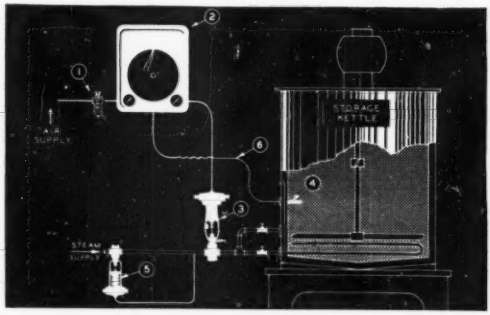



1. Filter-regulator
2. Model 63114 Time Cycle Controller
4. No. 138 Control Valve
5. Bulb
6. No. 515 Steam Pressure Reducing Valve

# Whether you're...

## COOKING SIZE

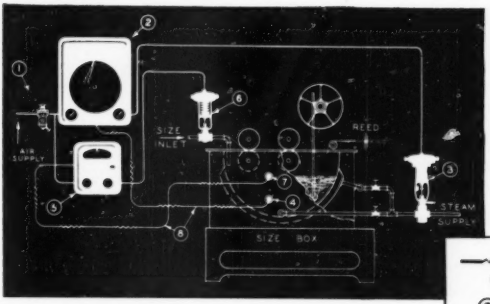
Masoneilan "Time Program" Cooking Control automatically controls size temperature and time schedules accurately, from beginning of rise to finish of cook. Saves labor and minimizes steam consumption. Records time and temperature.




1. Filter-regulator
2. Model 63110 Controller
3. No. 138 Control Valve
4. Bulb
5. No. 515 Steam Pressure Reducing Valve

## STORING SIZE

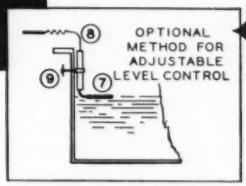
Masoneilan Storage Temperature Control holds size temperature automatically constant . . . and records it. Reduces labor, spoilage, and steam consumption.




1. Filter-regulator
2. Model 63110 Controller
3. No. 138 Control Valve
4. Temperature Control Bulb
5. Model 3700 Controller
6. No. 510 Control Valve
7. Level Control Bulb
9. Adjustable Clamp

## APPLYING SIZE

Masoneilan Size Box Temperature Control automatically keeps your sizing agent at the proper temperature and level; records size temperatures. Write for detailed information.




**Adjustable Level, too**

**Permits adjusting desired level!**

*Be doubly sure...*

## USE MASONEILAN TEMPERATURE CONTROLS

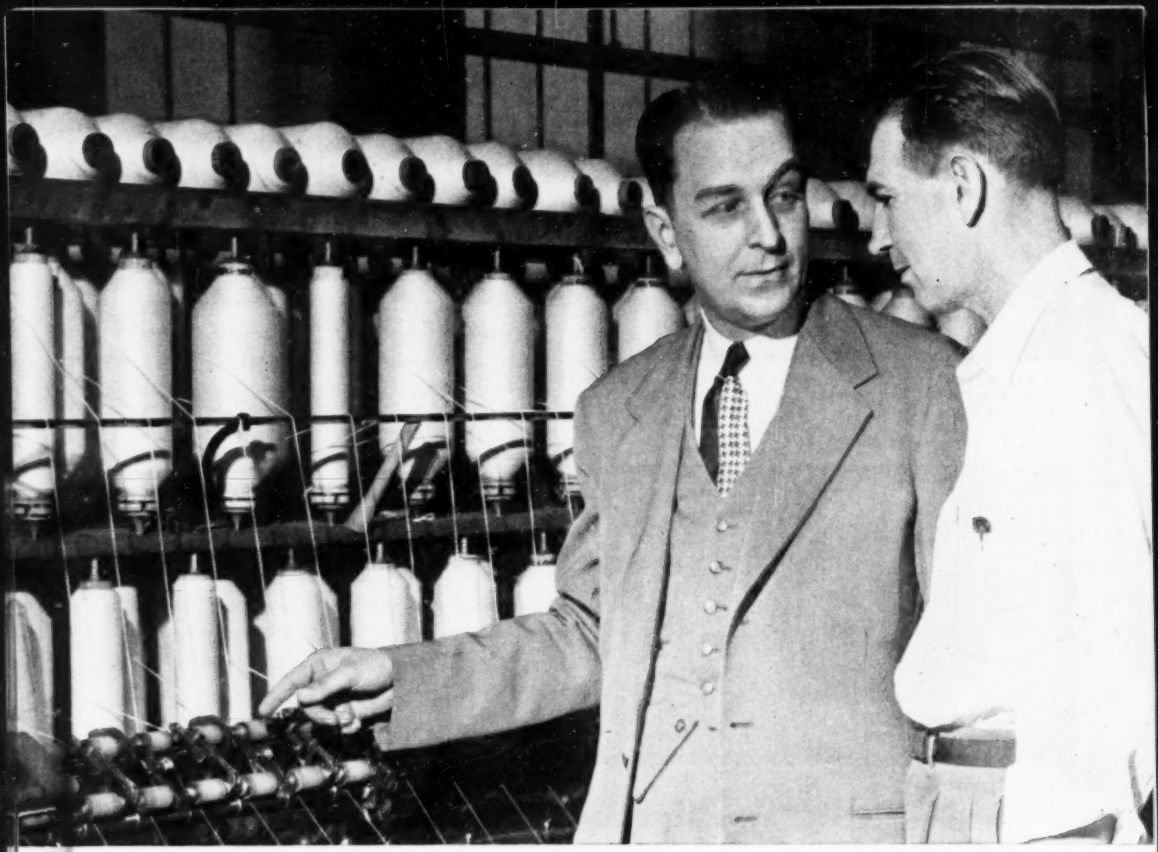
*. . . for Accuracy and Dependability!*

MASONEILAN

**MASON-NEILAN REGULATOR COMPANY**

**1194 Adams Street, Boston 24, Mass., U.S.A.**

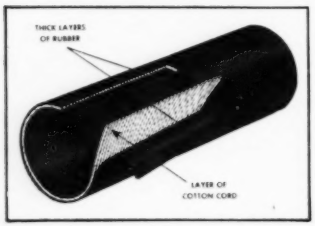
*Sales Offices or Distributors in the Following Cities:* New York • Syracuse • Chicago • St. Louis • Philadelphia • Houston • Denver • Pittsburgh Cleveland • Cincinnati • Tulsa • Atlanta • Los Angeles • San Francisco • Salt Lake City • El Paso • Boise • Albuquerque • Detroit Charlotte • Appleton • Corpus Christi • New Orleans • Louisville • Mason-Neilan Regulator Co., Ltd., Montreal and Toronto



# It's a long time between changes with these Armstrong's Aprons

When you put these aprons on, they *stay* on for years. Mill after mill reports Armstrong's Accotex® Aprons give six to eight years of top-quality, two-shift spinning.

If you could cut an Accotex Apron open, as shown below, you'd see the reason for this outstanding service. It's Armstrong's patented three-layer construction . . . an apron with each part made especially for the job it does.




Take the outer layer of synthetic rubber. It's specially compounded for smoothness and good drafting qualities. In use, it wears evenly, keeping its surface smooth and free of cracks and breaks.

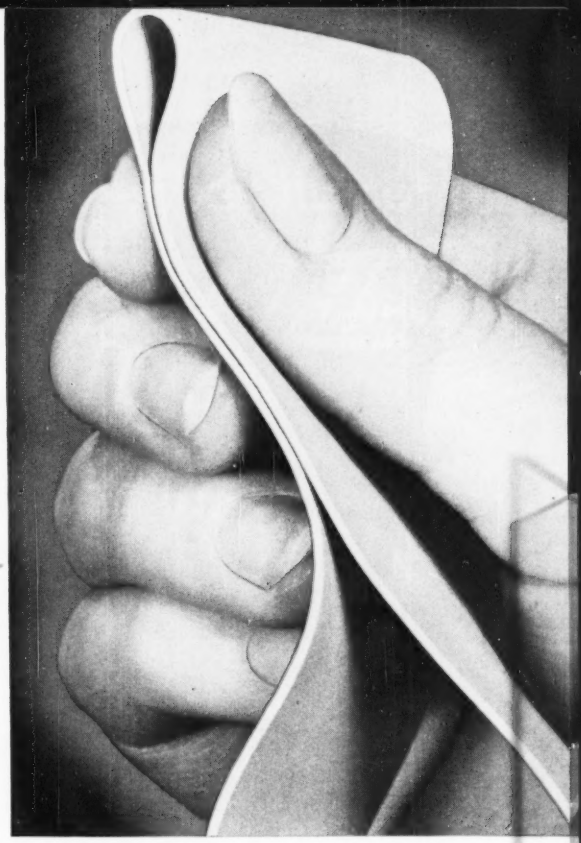
The core of the apron is a layer of strong cotton cords. These cords can't stretch. They keep the apron's dimensions constant and also prevent its edges from curling.

Finally, there's an inner layer, also of synthetic rubber. Like the outer layer, it does a special job . . . resists abrasion. It stands up under the constant rubbing of millions of trips over the nose bar during the life of the apron.

Vulcanized together, these three layers form a seamless apron that runs clean, stays smooth, and lasts for years—as fine a synthetic apron as can be made today.

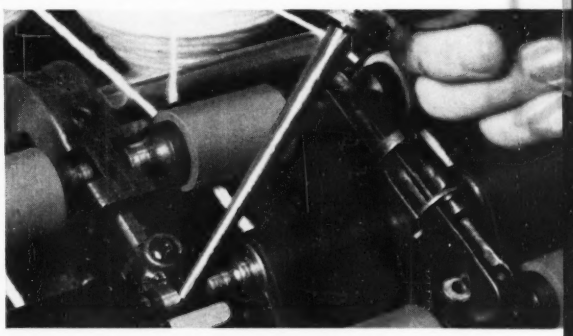
If you use long-draft equipment, either single or double-apron type, you ought to prove to yourself how efficient Accotex Aprons can be. To arrange for a test on your own frames, call your Armstrong Representative or write to Armstrong Cork Company, Textile Products Department, 3607 Arch Street, Lancaster, Pennsylvania. Available for export.

**NO SEAMS.** Smooth continuous layers of Accotex rubber on inside and outside of Armstrong aprons assure you of even drafting, prevent irregularities in the yarn. Seamless construction means *no* breaks, *no* cracks, no weak points to shorten service life.



**SUPER FLEXIBLE.** This NO-750 apron has the extra flexibility needed to hug the nose bar on single-apron frames. You can be sure of smooth slip roll action. It wears a long time too, and because the rubber is non-oxidizing, it stays flexible for years.

**SATIN SMOOTH.** Accotex Aprons are precision ground for smoothness to the exact dimensions you specify. They stay smooth, too, and wear evenly without breaking or cracking. Accotex aprons won't roughen, even after years of constant service.



**UNAFFECTED BY OIL, TEMPERATURE, OR HUMIDITY.** Accotex Aprons run clean because they don't absorb oil or soften when exposed to dyes or commonly used textile solvents. They run efficiently without sweating at any normal mill temperature.

# ARMSTRONG'S ACCOTEX APRONS

***One of Armstrong's complete line of textile mill supplies***

for all textiles . . .

Marquette
Roller Bearing Spindles
WITH FULL-FLOATING
FOOTSTEP BEARING

give you More Yarn at lower Cost

PROTECTED BY U.S. AND FOREIGN PATENTS AND PATENTS PENDING

The Marquette METAL PRODUCTS COMPANY
CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

*Representatives:* C. H. WHITE, 2300 ROSWELL AVE., CHARLOTTE, N. C.; WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA.
JOHN J. HALLISSY, 58 LIVINGSTON AVE., LOWELL, MASS.; HARRY KING, GREENVILLE, S. C.

*Also Manufacturers of:* HYDRAULIC GOVERNORS • FUEL OIL PUMPS • PRECISION PARTS AND ASSEMBLIES
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • FUEL OIL INJECTORS

Textile Industries
Vol. 115 • July, 1952

# News in Brief

**Management Day?** Representative William B. Widnall (R, N. J.) introduced into the House of Representatives a Joint Resolution calling on the president to set aside a day each year to be known as Management Day.

**TWUA to Organize South.** Emil Rieve, newly elected president of TWUA, told the press that his aim is to unify the factions behind a revitalized drive to organize the unorganized, particularly in the South.

**Pacific Gets Foot Health Award.** Pacific Mills has received the National Foot Health Council's "Award of the Year" for making an outstanding contribution to the promotion of good foot health. Pacific developed a chemically treated shoe lining which has important hygenic properties, holds the shape of the shoe better, and lasts longer than conventional shoe linings. It is called Pacifate Protected shoe lining.

**Universal Yarn Count System.** The Textile Institute's advocacy since 1948 of a universal yarn count system has been endorsed in a poll conducted by the Institute among its members in the British Isles.

**Industrial Relations Textbook Needed.** The Textile Education Foundation of Georgia, supported by Georgia textile mills, recently disclosed a studied opinion that existing textbooks on industrial relations were: outmoded, biased, or so distorted that they were actually dangerous in their teachings. The committee said it found a need for an up-to-date volume that incorporates tested theories and practices of industrial relations programs and agreed to underwrite the preparation of a new text book on the subject.

**Woolen and Worsted Outlook Improves.** Ames Stevens, newly-elected president of the National Association of Wool Manufacturers, assured tradesmen attending

## Review SRRL Cotton Processing Work

Industry specialists serving as collaborators to the Southern Regional Research Laboratory on cotton processing met at the USDA Laboratory in New Orleans on May 12-13 to review the work of the Cotton Mechanical Processing Division.

Seated are collaborators Norman E. Elsas, chairman of the board, Fulton Bag and Cotton Mills, Atlanta, Ga.; Walter G. Regnery, president, Joanna (S. C.) Cotton Mills; Charles C. Wilson, assistant director of research, West Point Manufacturing Co., Shawmut, Ala.; W. A. Turner, vice-president and general superintendent, Avondale Mills, Sylacauga, Ala. Standing is R. J. Cheatham, head of the Cotton Mechanical Processing Division.

Mr. Wilson served as collaborator in the absence of M. Earl Heard, vice-president and director of research, West Point Manufacturing Co., Shawmut, Ala.

In addition to reviewing the current work of the Cotton Mechanical Processing Division, this group offered suggestions and ideas to expedite and direct the work toward the greatest possible benefits to both farmers and cotton mills.

# A.P.T.'s NEW *Synthetic* ALL-PURPOSE

## AUTOMATIC LOOM BOBBIN

Here is a synthetic bobbin combining by patented "Plasti-weld" method: 1) virtually indestructible plastic nose; 2) base with plastic molded *continuous* rings positively assuring against mistransfer; 3) laminated barrel proved ideal through years of use on thousands of looms. THE FIRST TRULY ALL-PURPOSE BOBBIN, at last enabling mills to change style of yarn without changing bobbins.

- has great strength needed for nylon or other hard-twisted yarns.
- is unaffected by treatment of yarns requiring conditioning.
- has "gentle" surface for the most delicate soft-twisted yarns, or no-twist acetate.
- retains its brand new finish permanently — free from splitting, warping or chipping — giving ideal qualities of yarn retention and delivery.

**Consult A.P.T.**

### SOME ADVANTAGES OF USING A.P.T. CARRIERS

1. **SURFACE** of correct texture, groove and finish for free but controlled delivery of the particular yarn.
2. **STRUCTURE** by nature resilient and proof against chipping, splintering or cracking; of composition and hardness for the particular need, with light weight.
3. **MOISTURE RESISTANT** due to impregnation; of fibre construction inert to warping and distortion.
4. **UNIQUE DURABILITY**: retain their "brand new" degree of performance throughout their years of life. They do not "wear out" or diminish in efficiency from normal use.

**American Paper Tube Co.**

ESTABLISHED 1895

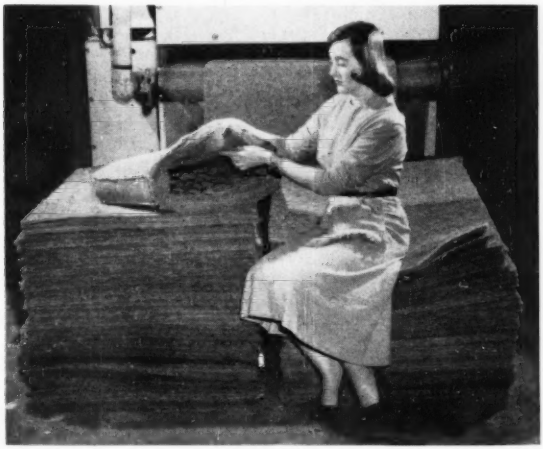
WOONSOCKET, R. I. GREENVILLE, S. C.

CANADIAN REPRESENTATIVE,
HUGH WILLIAMS & CO., TORONTO, CANADA

**54 YEARS OF RESPONSIBILITY FOR EFFICIENT AND ECONOMICAL CARRIER SERVICE**

## From Carpets to Furniture Cushions

Alexander Smith, Inc., 107-year-old floor coverings manufacturer, has invaded a new market. The company has started commercial production of a product called Air Felt. Initially, the company is concentrating on the production of felted materials used in the overstuffing of chairs and sofas by the furniture industry. Used in furniture cushions, as shown in the accompanying photo, Air Felt offers many advantages, according to the announcement



## News in Brief

the 87th annual meeting of the association that conditions in the industry are firming up. Indications of the brighter outlook are: advance of Boston wool tops prices; business activity in worsted yarns for future delivery; sale of 75% of the 1951-52 wool of the British Dominions which means that the 1952-53 Southern Hemisphere clip will not reach the market in substantial amounts until late next fall.

**Textile Production in Germany.** German textile production and exports are now above the 1951 average monthly level, but production is gradually dropping. An increase has been noted this year in exports of wool, cellulose yarns, and other raw materials produced in Germany. With the decline in production, some factories have closed down recently and others have reduced their working hours. Textile unions have supported a reduction in the working week to ease unemployment. Many German mills are now switching to production-line methods and are taking other measures to cut their costs.

**Old Timers Banquet at Joanna.** The Old Timers Club at Joanna (S. C.) Cotton Mills Co., presented an engraved silver service to William H. Regnery (president of Joanna-Western Mills Co.) recently in honor of his 75th birthday. Watches and $500 additional free life insurance were given to employees with 20 years of service, and jewel-studded pins were given to Old Timers with 25 or more years of service.

**FTC Accepts Term "Nylon Crepe."** The Federal Trade Commission has approved the use of the term "nylon crepe" to describe the woven and knitted fabrics made under the crepeing process patented last November by A. L. Dorgin of New York City.

**Over-expansion Seen in Textile Imports.** The Organization for European Economic Cooperation stated in Paris that over-expansion in the world's textile industries has become apparent since the reappearance of Germany and Japan in export markets.

**Union Leader in New Job.** George Baldanzi, formerly with TWUA, is now organizational director of the United Textile Workers, AFL.

**Date Set for Knitting Exposition.** The third biennial Knitting and Allied Crafts Exposition is scheduled to be held at Grand Central Palace in New York City in April, 1954.

**Ceiling Suspension on Rayon.** In suspending ceilings on fabrics of rayon and related fibers (Bulletin No. 705), OPS established "danger" or "trigger" price levels at which ceilings would be reimposed. The price agency maintains that it is legally free to cancel its suspension orders at any time, regardless of whether or not the market actually reaches the trigger points.

**Jazz and the Silk Worm Killer.** The Kyochu maggot which has been the scourge of Japanese silk worm breeders has at last been successfully combated by a Japanese entomologist. Dr. Yoshimasa Yagi has discovered that the grubs are sensitive to noise. Usually the maggot attacks and eats the silk worm, but when jazz music is played nearby the sensitive culprits adopt the line of least resistance and take flight from the din. In this instance the flight consists in burrowing into the worm deeper and deeper until eventually it is smothered by the fat of the silk worm . . . exit one more pest.

**Going Up.** 30 of the union groups dealing with General Electric have now accepted the GE current cost-of-living wage increase offer. A spokesman for GE recently stated: "We wish to emphasize that the production

# NEW, IMPROVED DAYCO COT

*Higher fiber repellence!*
*Stops time-outs for ends-down and lap-ups!*
*Cuts labor costs!*

Are you using ordinary cots now? Then look for *years* of extra cot life, when you change over to the Dayco Cot!

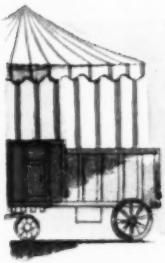
Look for improved fiber repellence, too—that will mean fewer lap-ups, fewer ends-down, cleaner yarn. And don't worry about the fibers you're spinning—the new Dayco Cot can be used on cotton, wool, blends or synthetic fibers!

What makes the Dayco Cot so much better than former cots? An entirely new compound of American Rubber, that gives you non-stop performance . . . reduces non-productive labor costs of handling ends-down, lap-ups. Put Dayco Cots on your frames, and expect to see a new standard of cot performance. You won't be disappointed!

**DAYTON RUBBER CO., Textile Division, Woodside Bldg., Greenville, S. C.**

# Performers

# Outdraw 'em all!



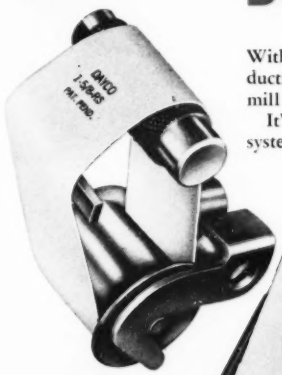
No wonder the Dayco Cot and the Dayco Long Draft Apron are such big attractions in the textile field! They're outstanding *performers*—cutting maintenance costs while they boost mill output!

## Dayco Long Draft Apron

With *this* apron, there's no warm-up period needed before you start production. You just turn on the power and spin, even on Monday morning mill openings. No false starts!

It's a precision apron—lengths and widths can be furnished for any systems. Dayton's exclusive marking methods guarantee perfect fit regardless of type or age of system. Thickness, diameter and width never vary. Controlled manufacturing assures uniform thickness so necessary to proper operation of both single and double apron systems.

Try the Dayco Long Draft Apron, and see for yourself how it cuts down starting time and maintenance, and how it yields up to 10% more uniform yarn!




Single Apron System

◀ Two Apron System

*Saves starting time! Speeds production! Cuts maintenance costs!*

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

**Dayton Rubber**

*Since 1905*

SERVING THE TEXTILE INDUSTRY SINCE 1899

# SONOCO SPOOLS

Precision Paper Products

Perfect carriers for all types of fringe, tapes, braid—narrow or wide fabrics; threads, yarns, cord and rope. Whatever your particular requirement, SONOCO has a spool to give you an efficient, low cost package. All standard types and sizes, or made to your individual specifications.

sonoco
PAPER CARRIERS
REG. U.S. PAT. OFF.

## SONOCO PRODUCTS COMPANY

MYSTIC CONN. | HARTSVILLE S. C. | BRANTFORD ONT.

DEPENDABLE SOURCE OF SUPPLY

of our Lockland plant is solely for the Air Forces. Therefore, any increases in wages will come directly out of the *public* pocket, not ours."

**Warner & Swasey Sulzer Weaving Machine.** E. R. Gardner, sales manager, textile division, The Warner & Swasey Company, told engineers assembled for ASME's spring conference on textiles that his company is receiving repeat orders from 80% of its weaving machine customers. The eight-harness machine has produced a large number of the industry's normal staples. Among those produced are: Cotton—blankets, sheetings, drills, twills, denims, broadcloths, print cloths. Worsted—2/2 45 degree twills, plain weaves, 2/1 twills, basket weaves, sheen gabardines, Bedford cords, some sharkskins, and other fabrics of this type where the color effect is obtained by solid color filling and contrasting color warp yarn, medium weight suitings with 2-ply warp and single or play filling, heavy uniform cloth, light-weight tropicals. Woolen—bed blankets, flannels, jerseys, meltons, automobile sidewall and upholsteries, ladies dress goods, coatings. Synthetic—150 denier acetate constructions. Blends—regular and light-weight suitings.

**Textile Men to Visit Bermuda.** The Carded Yarn Association and the Southern Combed Yarn Spinners Association, Inc., plan a joint convention aboard ship enroute to Bermuda the middle of November. The convention ship will depart from New York on November 14 and from Norfolk on November 15, arriving in Bermuda for two nights anchorage. While there the ship will be used for housing accommodations, and members will participate in a golf tournament on the island. Convening members will return to New York on the 22nd.

**Dutch X-Ray Testing Device.** A textile testing device has been introduced recently by Philips of Eindhoven, Holland. The device utilizes X-rays, is compact, and is non-destructive to the materials tested. The apparatus can be used to examine material which passes continuously through it. X-ray photographs may be taken with the instrument.

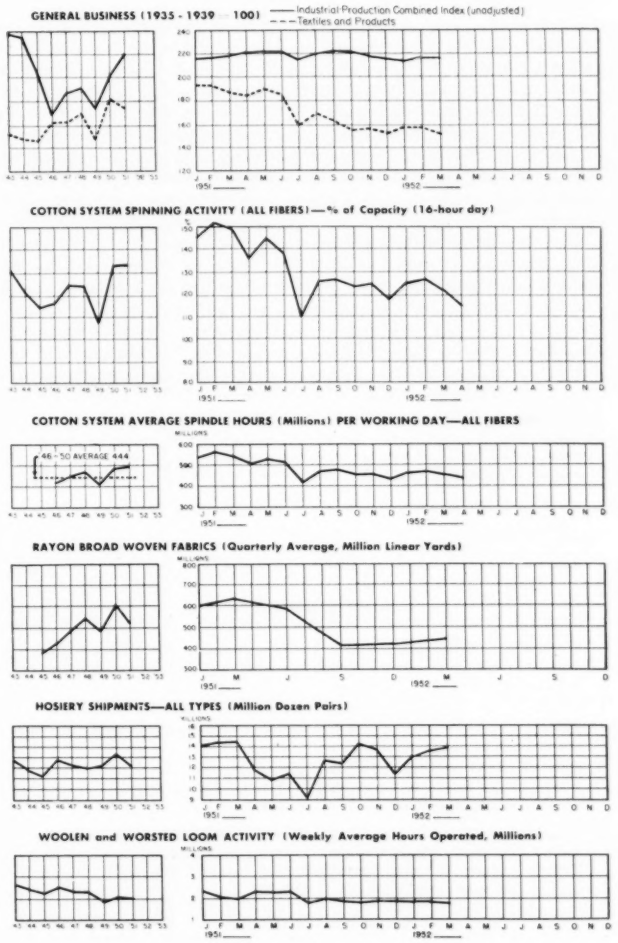
**Government and Industry Standards.** The federal government and the military services will now use nationally recognized industry and technical society standards "to the maximum extent practicable" in developing federal and military specifications and standards, a government official recently told the Standards Council of ASA.

(*Continued on page* 201)

## News in Brief

## Textile Industry Activity Charts

**Source of information:** Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.


GENERAL BUSINESS (1935 - 1939 = 100)
Industrial Production Combined Index (unadjusted)
Textiles and Products
COTTON SYSTEM SPINNING ACTIVITY (ALL FIBERS)—% of Capacity (16-hour day)
COTTON SYSTEM AVERAGE SPINDLE HOURS (Millions) PER WORKING DAY—ALL FIBERS
46 - 50 AVERAGE 444
RAYON BROAD WOVEN FABRICS (Quarterly Average, Million Linear Yards)
HOSIERY SHIPMENTS—ALL TYPES (Million Dozen Pairs)
WOOLEN and WORSTED LOOM ACTIVITY (Weekly Average Hours Operated, Millions)
1951
1952

# AN EXECUTIVE Views

## THE NEWS IN TEXTILES

*Prepared by a man who is closely identified with the textile industry.*

## It Can Happen Anywhere

ONE OF THE STRANGEST phenomena of recent years has been the great hue and cry which has come from New England with regard to the loss of the textile industry. We should say the "so-called" loss of the textile industry because as many of you realize there is still a considerable amount of spinning, weaving, knitting, and finishing of synthetics and some cotton—not to mention wool and other fibers—going on in that great region.

The unusual phase of this situation, however, is that the textile industry has gradually been leaving New England for a number of years, and yet the publicity over this fact seems to have reached a focus just within the last year or two. A visitor from another planet might think that no mills had left New England until 1951 and that suddenly, in great droves, they started drifting away.

What has happened in New England, of course, is a serious matter. It is particularly serious to the thousands of textile people who once worked in mills which are no longer located in New England; it is a serious matter to management; and it is a serious matter to the stockholders who had invested their money in New England textiles. From the standpoint of other regions, it is also a very serious matter because what has happened in New England can happen anywhere.

Just to refresh our memories, let us go back to the year 1900 and take a look at what we had from the standpoint of textiles in that year. We had nineteen million active spindles on the cotton system. Of this number 4,277,000 were located in the cotton growing states and 12,849,000 were located in New England. The remaining spindles were scattered through miscellaneous states. As can be seen, there were three times as many active spindles in New England in 1900 as there were in the South.

From 1900 to 1925, this situation was gradually changing, but it was not actually changing to the detriment of New England. Both New England and the South were growing from the standpoint of cotton manufacturing and, by 1924, the South had risen from slightly over four million spindles to almost seventeen million spindles. New England, in like manner, had also increased, going from over twelve million spindles in 1900 to slightly over seventeen million in 1924.

Thus 1924 might be called the "year of balance" because at that time spindles both North and South were just about balanced, with half of the country's spindles in the North and half in the South. For more than twenty years, New England had risen on the charts. Her textile industry had grown year by year and it was not until the 1920's that the first decline was noted. From that point on, however, the story was different and much, much sadder.

After the early 1920's the number of spindles in New England declined, with almost every year showing a drop to some new low. By 1951, the once mighty New England textile industry had dropped to 3,500,000 active spindles from a highwater point of over eighteen million in the 1920's. The South, on the other hand, did not show a great increase in spindleage from 1924 to 1951, but it did show a certain amount of stability. As a matter of fact, we can

### LABOR RULINGS

Strikers' discharge for allegedly violating court order regulating strike conduct is found to be discriminatory by arbitrator in that only 11 of 90 employees charged with violation of court order were released. Employees ordered reinstated with back pay.

Two per cent rise in cost-of-living index is substantial enough to allow union to reopen contract on wages under clause permitting reopening "when made necessary by . . . conditions affecting the industry or employees," arbitrator rules.

Discharge for nonpayment of dues which accrued prior to date of union-shop contract or for nonpayment of fines is unfair labor practice under LMRA.

look at 1924 and see that in the South there were 16,944,000 spindles and that in 1951 there were 16,996,000 spindles.

Numerous studies have been made to try to show the reasons for this decline of the New England textile industry. No doubt, books have been written about it. Certainly, many speeches have been made—notably by the Governors of Massachusetts and Rhode Island—concerning this loss. This writer does not expect to try to analyze that situation, because there were many factors which led to the decline of New England textiles, but we would like to point out that the discriminatory attitude of local and state government in New England must have played a major role in driving textiles out of New England. The role of local government, plus the loss of management prerogative, sounded the death knell.

The lesson for all of us is that what happened in New England can happen elsewhere. It was not just textiles that left New England. Where is the shoe industry today? It is not in New England. No region and no country has a God-given right to the textile industry. Capital goes where the climate is most favorable—and we do not mean the weather. We mean the climate from the standpoint of local government and public opinion.

Yes, what has happened in New England can happen anywhere. It can even happen in your own community.

## New President

As noted elsewhere in this issue, William A. L. Sibley, vice-president of Monarch Mills, Union, S. C., was elected in May as the fourth president of the American Cotton Manufacturers Institute. Shortly after his election, he spoke to the annual meeting of the Southern Textile Association, which was held at Myrtle Beach, South Carolina, and it is notable that in his first address after his election as president of the Institute, Mr. Sibley took occasion to point to the need for character and integrity in the textile industry.

He called his address "The Missing Element." Said Mr. Sibley: "We can teach carding, spinning and weaving. We can train men to become loom fixers, and we can even train men to supervise the work of others and to deal with their subordinates with intelligence and human understanding. In fact, there is perhaps only one thing we cannot give to a man, we cannot give him integrity— that moral wholeness that comes from above and grows within the man. This, to my way of thinking, is where our country has gone astray. This is 'The Missing Element'!"

Mr. Sibley then expanded his thought to the national level, and pointing to the recent seizure of the steel industry and the tax scandals, he concluded by stating that what the nation and the world are hungering for today is this "Missing Element,"—integrity and character.

It is indeed refreshing in this time to see one of the leaders in our industry who is willing to stand up and speak out for these time-honored virtues, which many in high public offices seem to have forgotten.

## Summer Tonic

Are you tired and run-down? Do you find yourself disgusted with national and local politics? Do you feel that the country needs a tonic and a revitalization?

It may be that that tonic is going to be supplied when the two national conventions meet this month. Don't lose sight of the fact that no matter how hard you try to make a quality product at a reasonable price, a great many of the decisions which decide the success or failure of your business will be made in Washington by people who have never been inside of a textile mill. The script for the next four years is being written this month. Will it be Kefauver, Taft, Eisenhower, Warren? This is a summer of great decisions and upon the conversations taking place in hotel corridors and meeting rooms may hinge the fate of the nation and of the world.

**July 16-19**—Southern Industrial Relations Conference, Blue Ridge and Asheville, N. C.

**Sept. 8-10**—Third National Standardization Conference, sponsored by the American Standards Association, Museum of Science and Industry, Chicago, Ill. To be held in conjunction with Centennial of Engineering.

**Sept. 9-13**—7th National Chemical Society Exhibit, the Coliseum, Chicago, Ill.

**Sept. 10-11**—Fall meeting, The Fiber Society, Inc., Princeton, N. J.

**Sept. 11-13**—Third Canadian Textile Seminar, Queens University, Kingston, Ontario, Canada (previously scheduled for Sept. 18-20).

**Sept. 25-26**—Annual convention, National Association of Cotton Manufacturers, Wentworth-by-the-Sea, Portsmouth, N. H.

**Oct. 6-11**—Seventeenth Southern Textile Exposition, Textile Hall, Greenville, S. C.

**Oct. 16-17**—Annual convention, The Quartermaster Association, Biltmore Hotel, Atlanta, Ga.

**Nov. 6-8**—31st annual convention of the American Association of Textile Chemists and Colorists; also the Textile Dyeing and Finishing Exposition. Hotel Statler, Boston, Mass.

**Nov. 14-22**—Annual conventions, Carded Yarn Association and Southern Combed Yarn Spinners Association. Convention cruise to Bermuda.

**Nov. 19**—34th annual meeting, American Standards Association, Waldorf-Astoria, New York, N. Y.

**Dec. 1-6**—20th National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York City.

# ENGINEERED

## *For Modern Loom Speeds*

This Jacobs Lug Strap is made of best quality duck, specially reinforced at points of wear and stress, and is fused with special hide glue.

Like all Jacobs products, Reinforced "Verybest" Lug Straps are a result of 82 years' leadership in loom accessory manufacture. Experienced weavers demand them.

JACOBS

REINFORCED "VERYBEST" LUG STRAP

★

A LOGICAL RESULT OF DECADES OF CONSTANT IMPROVEMENT AND RESEARCH

★

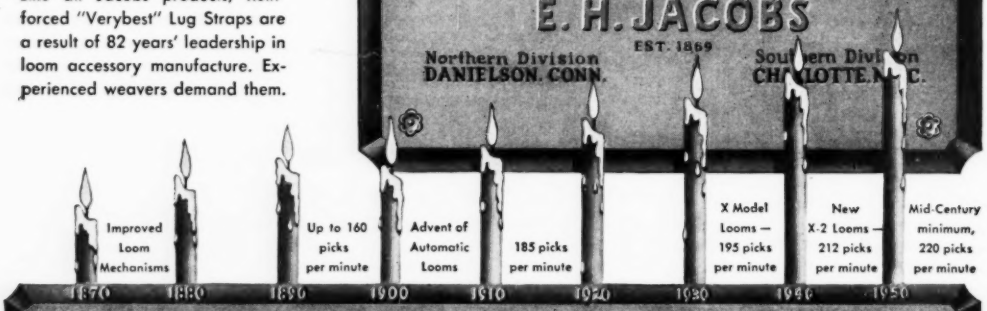
THE BULLARD CLARK COMPANY

E. H. JACOBS

EST. 1869

Northern Division
DANIELSON, CONN.

Southern Division
CHARLOTTE, N. C.




JACOBS LOOM NECESSITIES MEET EVERY LOOM SPEED REQUIREMENT

# NEW Equipment AND MATERIALS

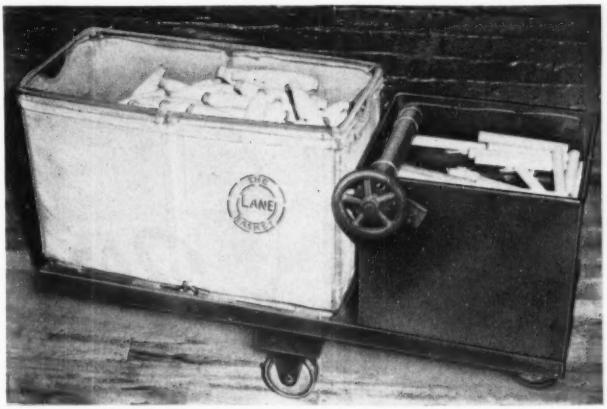
## Elevator-Type Bottom Raises Bobbins to Ease Doff Truck Unloading

A false-bottom doffer's truck that eliminates bending-over on the part of the doffer has been developed. A wire cable attached to all four corners of the false bottom raises the bobbin level when the doffer turns the raising wheel. Ratchet-held, the bottom falls back with a single motion for refilling when the holding pawl is released. The arrangement not only makes the doffer's work easier, the manufacturer states; it saves time as well.

In addition to the all-metal bin for empty bobbins, the truck also carries a removable canvas basket for full bobbins.

*W. T. Lane & Bros., Inc., Poughkeepsie, N. Y.*

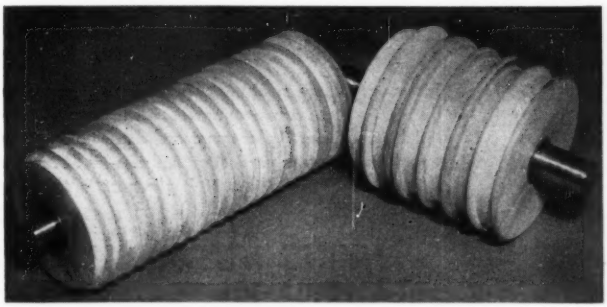
For additional data, request item G-103, using business reply card on page 200.




**False-bottom doffer's truck by Lane.**

## Package Loom Sheave Repair Unit Now on the Market

Now on the market is a package repair unit for loom sheaves consisting of: (1) Woodex sheaves made to the mill specifications—these sheaves are of rock maple with oil impregnated Woodex bushings; (2) polished and ground steel shaft, fitted exactly with correct tolerances for maximum wear in smooth operation; (3) steel washers and cotter pins when necessary.

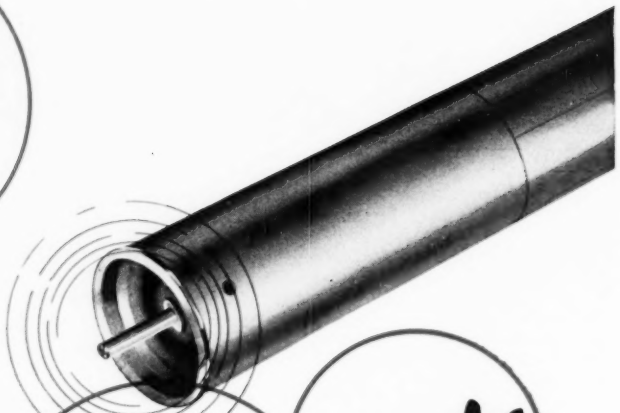


Benefits to be derived from the use of this repair unit have been enumerated by the manufacturer as follows: smoother sheave operation, longer sheave life, one responsibility for a number of items, less work for mill shop, less time required for loom fixer to make repairs, fewer seconds due to fragments of wood in cloth, proper tolerances always maintained, lower inventory due to interchangeability of parts, elimination of sheave damage due to reuse of worn shafts.

*Wakefield Bearing Corp., Wakefield, Mass.*

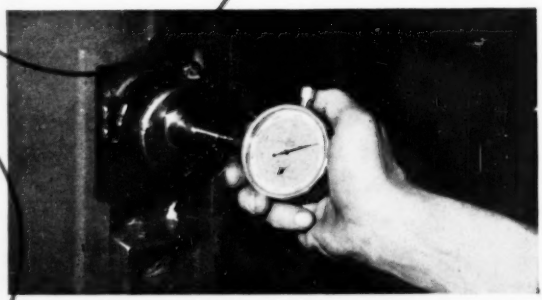
For additional data, request item G-110, using business reply card on page 200.

# Seen Only In The Best Circles



JENKINS Dynamically Balanced SPINNING CYLINDERS

**ALL MACHINE PARTS PRECISION MADE IN OUR OWN SHOPS**



JENKINS DYNAMICALLY BALANCED CYLINDERS are precision engineered for vibration-free performance *at all speeds.*

It pays to "go around" with the best in the trade—and in spinning cylinders, that's Jenkins!

The money these smooth-running cylinders save you by eliminating excessive wear on frame parts . . . by reducing cylinder replacement and down time . . . by smoothing out yarn production and quality . . . prove beyond doubt that *the best is cheapest in the long run!*

**JENKINS**

**ENGINEERED PRODUCTS**

**JENKINS METAL SHOPS**
**GASTONIA, NORTH CAROLINA**

The Colormaster Differential Colorimeter by Manufacturers Engineering and Equipment Corp.

## Color Measurements Made in Less Than 30 Seconds

The "Colormaster Differential Colorimeter," an instrument for obtaining accurate color measurements of synthetic fibers, liquid solutions, pigments, slurries—any substance, in fact, where color is an important factor—is now available.

A complete set of color measurements can be made with the Colormaster in less than thirty seconds, the manufacturer claims. The instrument is reported to have a system sensitivity appreciably greater than the eye can discern, and is said to be particularly useful for measuring differences between similar colors for process control applications. It is simple to operate, and results are taken directly from an easy-to-read dial.

Three color filters give approximations to the I.C.I. X, Y, and Z functions, and transmissions and reflections are measured directly. The linearity of the instrument is within approximately 0.2 per cent reflectance or transmission down to 10 per cent; by standardizing on a known dark panel, the range can be extended far below 10 per cent, with linearity within approximately 0.02 per cent. The dial can be read to 0.1 per cent, and hundredths of a per cent can be readily estimated. The dead zone (back-lash) does not exceed 0.02 per cent reflectance or transmission.

Because the Colormaster is highly stable after a warm-up of about one-half hour, it requires infrequent standardization, according to the manufacturer. Magnetic shielding is included to permit measurement of colors where steel panels may be used. The electrometer input impedance is about 6,000 megohms. Two calibrated, highly stable white panels are furnished with the instrument. Standard dark panels are available as accessories.

The Colormaster is vibration-proof and requires very little maintenance; it is not subject to humidity effects. Operation is from 60 cycle 115 volt power mains, and the power required for the instrument is approximately 65 watts.

*Manufacturers Engineering & Equipment Corp., Hatboro, Pa.*

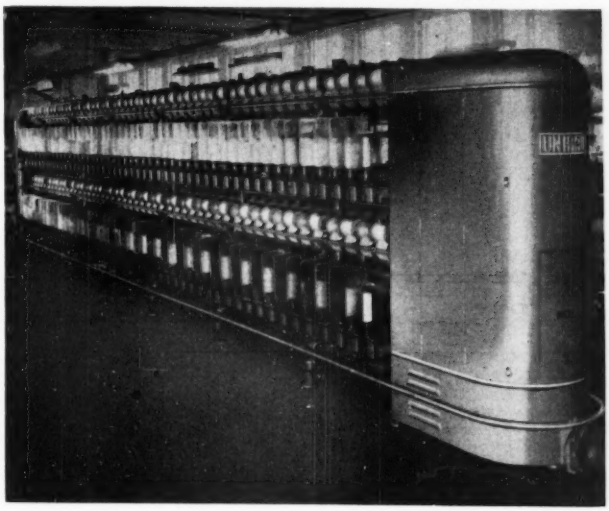
For additional data, request item G-102, using business reply card on page 200.

## Unirail Uptwisters Shown in Atlantic City Now Available

Improved yarn quality, better bobbin build, simplified installation, increased production, lower power costs, less maintenance, and longer life are advantages claimed for the "Unirail" uptwisters which are now available. (One of these machines was on display at the American Textile Machinery Exhibition in Atlantic City, N. J., May, 1950. See TEXTILE

*(Continued on page 159)*

**Mill installation of Universal's new "Unirail" uptwister.**



# CONSISTENT QUALITY at MAXIMUM SPEED

**7′ and 5′ INSULATED CYLINDERS**

**POSITIVE DRIVE**

**Heavy-duty ANTI-FRICTION BEARINGS**

**Improved Model 50 SIZE BOX**

**TENSION CONTROLS**

**Variable Speed HEAD ENDS**

**Advanced CREEL Design**

Because of its many advanced features, special equipment and greater capacity, this improved model WPF&M 2-Cylinder Slasher can produce an output of correctly sized yarn, free of excess stretch, at maximum speed.

The entire slasher, from creel to head end, has been improved and modernized and is now designed and constructed for fast, uninterrupted operation at low cost.

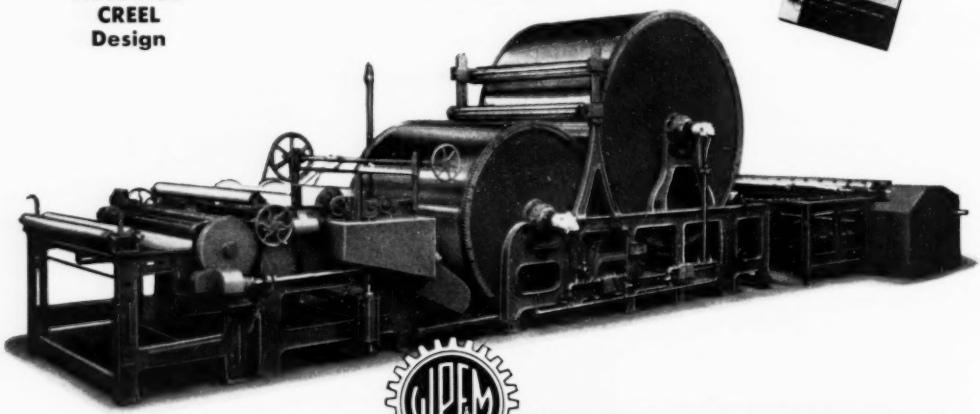
Modern tension, pressure and temperature controls, positive and variable drives combined with the WPF&M advanced-type Size Box and Head End assure top-quality production day after day . . . eliminate costly guesswork and waste.

Whatever your mill requirement—from the lightest gauze to the heaviest sheeting—this versatile WPF&M Slasher can be adapted to fit your needs.

Let us show you, without obligation, how modern slashing equipment and methods can step up your production and quality at reduced operating costs.

***Free Booklet*** "Cotton Slashers" describes the many special features found only in the WPF&M Slasher

MAY WE SEND YOU A COPY?



**WPF&M WARP PREPARATION MACHINERY**

STANDARD 2 and 3 CYLINDER SLASHERS
MULTI-CAN SLASHERS
WPF&M HI-SPEED 4 CYLINDER SLASHERS
CALLAWAY SAMPLE SLASHER

**SLASHER MODERNIZATION EQUIPMENT**

HI-SPEED HEAD ENDS WITH STRETCH CONTROL
STANDARD WPF&M HEAD ENDS
MULTI-MOTOR DRIVES and CONTROLS
TEMPERATURE, SPEED and TENSION CONTROL DEVICES
HI-SPEED SIZE BOXES
MODEL 50 SIZE BOXES
STANDARD SIZE BOXES
SIZE KETTLES and EQUIPMENT

**WEST POINT FOUNDRY & MACHINE CO.**

**WEST POINT, GEORGIA**

# Shorts and Remnants

### Market for Textiles

Predictions made in the '30s were that the population of the U. S. would level off and probably decline. Forecasts in that field were poor, because it now seems, according to the Bureau of the Census, that the population will increase—reaching 200 million by 2000 A.D., according to some other estimates.

That's going to be a nice textile market, and not too far off either. Hope we're around to serve the mills that serve the market—already making our plans for the occasion.

### Predict Yarn Strength

"Having read with interest . . . paper entitled 'Predicting Cotton Yarn Strength' . . . be most grateful if a copy of same could be forwarded to me. . . "

F. BRYANT
Laboratory Manager
Prestige, Ltd.
East Brunswick, Australia

► Story was by John Duerst of Clark Thread Company. Clip sheets sent; no reprints.

### Patent Council

" . . . noted a reference to the National Patent Council . . . be good enough to send me the address together with information. . . "

W. O. STOUGHTON
Devon, Pa.

► Address, 1434 W. 11th Ave., Gary, Indiana.

### A Back Pat

" . . . your publication is a valuable asset to us in keeping abreast of the latest developments in the textile industry in conjunction with the courses that we teach in textile technology. Your articles are timely and useful. . . "

LOUIS F. HAAGE
Instructor
N. Y. State Institute of
Applied Arts and Sciences
Utica, N. Y.

### TI Articles for Book

" . . . writing a book on cotton preparatory machinery . . . articles in your journal are very valuable and informative . . . like to include 'The Maintenance and Operation of Cotton System Warping Equipment,' by John C. Bodansky [January 1951 issue] . . . "

TEJA SINGH
Weaving Supt.
Lakshmiratan Cotton Mills Co.
Kanpur, India

► Permission to reproduce in book granted.

### Journals Boosted Program

" . . . during 1951 there was a sizable gain in the number of people buying Defense Bonds on the Payroll Savings plan, from an estimated five million to over six and a half million . . . these results could not have been attained without your support. . . "

O. JOHN DAVIS
Treasury Dept.
Washington, D. C.

► TI, along with numerous other business publications, donated space to promote the sale of bonds.

### Pick Counter Experience

"On page 167 (Case 63) February issue we note an article under the caption 'Electronic Pick Counter Saves Time' and were wondering if you have objection to letting us know the name or names of the firms in the U. S. A. who are now using this electronic pick counter . . . anxious to contact someone who has had experience therewith. . . "

W. G. E. AIRD
Montreal Cottons Ltd.
Valleyfield, P. Q.
Canada

► Mill name given in this instance.

### Bleaching Cotton

"Kindly advise us how we may obtain about one-half dozen copies of the following article: 'The Preparation and Bleaching of Cotton Piece Goods' by A. Durfee Damon, general superintendent, Lockwood Dutchess, Inc., Wappinger Falls, N. Y., which appeared in the July, August, and October issues of your journal."

J. P. REDSTON
Sales Manager
Textile Chemical Dept.
E. F. Drew & Co., Inc.
New York

► Just write us; we have reprints.

### Cotton Waste

"In the September 1950 issue you had a very informative article, 'Cotton Waste—A Phase of Manufacturing Offering Research Opportunities' . . . very interested in these facts which were so well organized in the article. . . appreciate five copies. . . "

JAMES M. CONNER
Research & Development
Hyde Park Mills, Inc.
Covington, Tenn.

► TI's story was an abstract of a much larger study made by the National Cotton Council. No reprints available of the abstract, but copies of the entire article may be secured directly from the Council.

### Black Cat Days

From Draper's "Cotton Chats" we get the interesting story of the black cat fad of lo these many years ago.

It seems that the old Arnold Print Works experienced a period of rather poor business, so someone in the mill designed a black cat which was printed on the cloth. An enterprising housewife who evidently liked cats

but disliked putting them in and out, cut out the cat pattern, sewed the sides together, and stuffed it.

The fad spread like wildfire, and thousands upon thousands of the cat patterns were sold.

During the past few months, the textile industry could well have stood another black cat fad; yes, even yellow, brown, gray, and striped.

## *Permanent Straightness*

At every point where straightness is important — butt, shank, stem and beard — Textile Spring-Beard Needles are straight and true. And Textile Needles remain in perfect alignment through every high-speed knitting operation.

Straightness is one of the many advantages you get through Textile's quality controls — automatic and electronic. A special steel formula, proper tempering and the careful balancing of needle resiliency and needle length result in longer-lasting needles, better performance, lowered production costs.

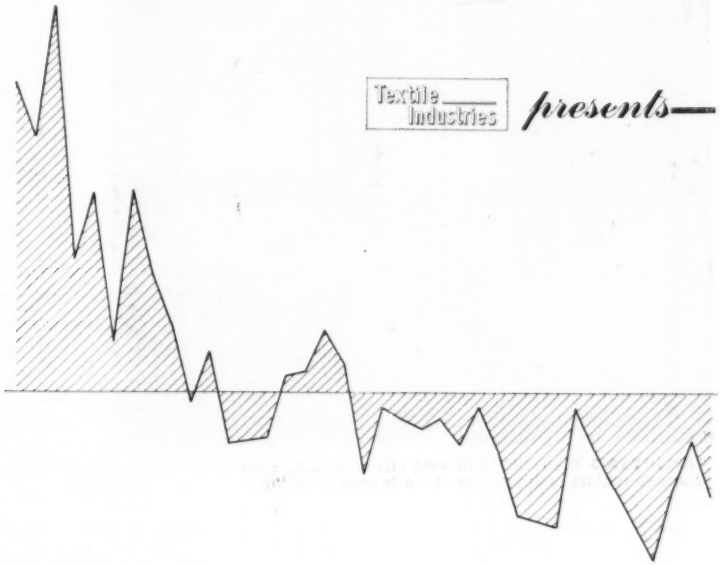
TEXTILE MACHINE WORKS, READING, PENNA.

# *Textile*

## SPRING-BEARD NEEDLES

*For Full-Fashioned Knitting*

*For Tricot Knitting*



Textile Industries *presents*—

# Wamsutta's New Waste Control Program

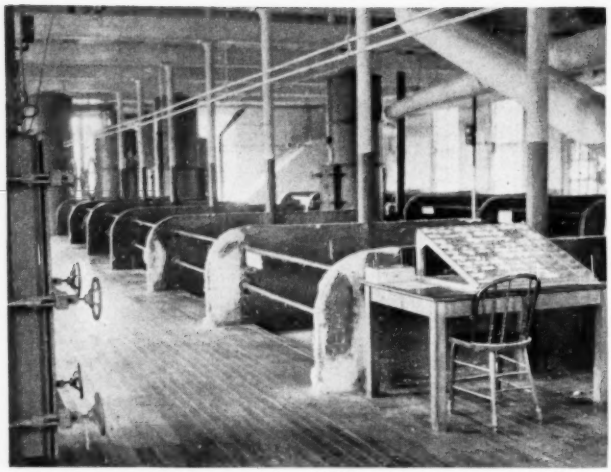
By **EDWARD S. RUDNICK**
*Director of Research*
*Wamsutta Mills*

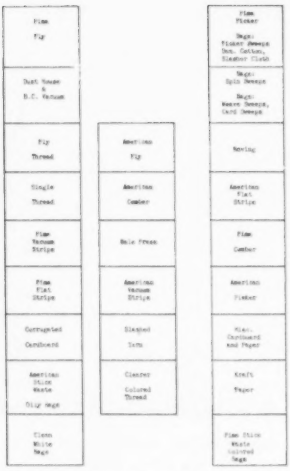
WAMSUTTA is saving an average of over $2,000 a week by means of its new waste control program. This saving is a result of waste reduction throughout the plant and more revenue from the salable waste that is made.

Realizing the tremendous savings that are possible in a planned waste reduction campaign, engineers at Wamsutta made a complete study of the waste situation before instituting the program. The study indicated a lack of system in handling waste and that the wrong attitude toward waste existed.

Wamsutta now has a system, and Wamsutta is reaping the benefits of a planned waste program. All personnel at the plant have a feeling of responsibility toward waste; savings are made possible by cooperation down the line.

To know how Wamsutta made the study, what it found, and how the correction took place—please turn the page.—Eds.





**WAMSUTTA'S WASTEHOUSE** with pits or bins for each waste classification is shown above. Right, plan view of bins to contain each category of waste prior to baling.

***$100,000 saved per year***

# Wamsutta's New Waste Control Program


**By EDWARD S. RUDNICK**

*Director of Research*
*Wamsutta Mills*


Wamsutta Mills, located in New Bedford, Massachusetts, was incorporated in 1846. It presently has about 105,000 spindles and 1,850 wide and narrow looms—all on fine, combed cottons. About 300 bales of cotton are consumed a week, and, being a combed yarn mill with about 33% waste, roughly 100 bales a week end up as waste. About 40% of the amount used is imported Karnak and Pima cottons on which prices currently range close to $1.00 a pound; the remainder is staple Peeler cottons which also have comparatively high dollar values.

DURING the past three years a new program for controlling and reducing waste has been set up at Wamsutta Mills. Savings from the program are averaging over $2,000 a week, or $100,000 a year. This article deals with the details of how this program was installed and how it presently operates.

The gains accomplished from this program fall into two logical sources. The first is from realizing the most revenue for that salable waste which is made; the second is by reducing the waste as much as possible without harming quality.

**Preliminary Investigations.** Since waste reduction and quality control are closely related, the job of setting up a formal waste control program was tackled by the quality control department. To set up such a program, several preliminary studies had to be made to determine how the waste was being handled in the past and what changes were necessary. Extensive time was spent in each production department compiling waste information by observation and talks with the overseers, secondhands, and waste handlers.

The object was to try to ascertain the types of waste being made in each department, to what extent they were separated, how and by whom they were being handled, the method and frequency of their disposition, whether they were being weighed or reported in any manner, etc. From this information, a chart was made for each department, one of which is reproduced in Fig. 1. Samples of each type of waste were collected and cataloged.

**Adequate Wastehouse Facilities.** Then more time was spent observing the procedure in the wastehouse itself. Wamsutta has a spacious wastehouse. It is a three-story building connected by ramps to the rest of the mill—one ramp at each end of the third floor level and one at one end of the second floor.

There are a number of fireproof bins in three rows opening at the third floor level at the top (see headline picture and bin layout).

The contents of each bin can be removed from the second floor level by lifting sliding doors. This second floor forms the top level of an overhead bale press in the center of the room. Since each bin can hold the equivalent of at least a bale of waste, the waste is merely pulled out of the bins and pushed down the bale press chute, the finished bale being completed, weighed, stored, and shipped at the first floor level.

However, this second study revealed that these facilities were not being utilized to their best advantage. Another chart was made of the various waste categories at the wastehouse, showing how they were handled, how frequently, the approximate quantity of each, etc.

A portion of this chart is shown in Fig. 2.

**No System for Handling Waste.** A study of these charts revealed

**WASTE DISPOSITION BY DEPARTMENTS (Fig. 1)** before the study of waste was made at Wamsutta and before the control program was instituted. Object was to determine the types of waste made in each department and how waste was handled. A chart similar to this was made for various departments. This one is for the card room.

**Fig. 1.**

| Waste Type | Method of Collection | Frequency of Collection | Disposition | Weighed |
|---|---|---|---|---|
| Vacuum Strips | Vacuum tanks in wastehouse; American and Pima separate | Every 4 hours | Emptied to Peeler or Pima vacuum strip bins | No |
| Flat Strips | From cards to trucks; American and Pima separate | Every 2 hours | Trucks emptied to Peeler and Pima flat strip bins every shift | No |
| Fly Waste (incl. licker-in stick waste) | From cards to trucks; American and Pima separate | Every shift | Trucks emptied to Peeler and Pima fly bins every other shift | No |
| Sweepings (incl. Friday's brush down) | Collected in bags separate from rest of card room and picker sweeps | Every shift | Dumped in sweeps bin with no identifying tag | No |
| Reworkable Lap Waste | Collected in trucks by staple length and type | Indefinite | Trucks brought to opening room | No |
| Reworkable Sliver Waste | Collected in cans by staple length and type | Indefinite | Cans brought to waste picker | No |

**ORIGINAL WASTEHOUSE HANDLING (Fig. 2)** of waste before the control program was instituted. This is only a portion of the chart made. All waste handling procedures were studied.

**Fig. 2.**

| Waste Type | How Handled | Approx. Bales per Mo. | Comments |
|---|---|---|---|
| Peeler Strips, Blown | From bin to press by hand | 5 | |
| Pima Strips, Blown | From bin to press by hand | 1¼ | |
| Peeler Strips | From bin to press by hand | 30 | Often in wrong bins |
| Pima Strips | From bin to press by hand | 14 | |
| Peeler Fly | From bin to press by hand | 5 | Often in wrong bins |
| Pima Fly | From bin to press by hand | 2 | |
| Card Sweeps | Bags removed from bin, opened over press chute | 5 | Includes sweeps from all of card room; difficult to distinguish from Spin. Sweeps until opened and examined —latter contains bands. |

**CAREFUL CONTROL** of picker settings has reduced picker lap waste to only a few laps per week; those laps which fall beyond control limits are reworked in opening room.

that there was very little coordination between the production departments and the wastehouse itself, as summarized:

1. The larger classes of waste such as comber noil and card strips were being trucked to the top floor of the wastehouse and dumped into the respective bins without being weighed and with no records kept.

2. In all the production departments there were only three places where waste records were being kept—reworkable comber and drawing sliver in the card room, stick waste in the spinning rooms, and yarn waste in the slashing rooms.

3. Oftentimes the larger classes of waste were being dumped in the wrong bins because the labels were not clear or the waste handlers did not realize the importance of segregation.

4. Most of the smaller classes of waste were being transported in roving trucks to the second floor of the wastehouse and just left there, sometimes with slips telling what they were, sometimes without, some with several classes mixed in the same truck, others separated only to be baled together by the wastehouse men.

5. Oftentimes as many as 100 roving trucks were tied up with waste in this manner with barely any room to move around, while the wastehouse men waited for sufficient quantities of the respective classes to accumulate so they could make bales from the trucks instead of from the bins.

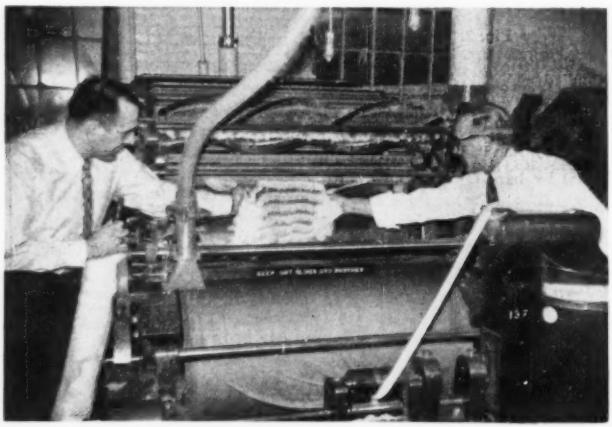
6. Some of the thread waste and other small classes of waste were being put in burlap bags, as were most of the sweeps, and tossed into a single bin with few identifying labels, only to be re-sorted if possible by the wastehouse crew.

7. Each week the wastehouse crew was picking out a box full of bobbins, spools, Barber-Colman starters, and a few bottles from the waste as they baled it.

8. Much good waste was being brought to other places (like the boiler room and scrap piles) instead of the wastehouse. These consisted of sweeps from the weaving and slashing rooms, all types of paper and cardboard, oily or broken bobbins with yarn on them, etc.

9. Oftentimes, the same class of waste was being called and tagged by different names from different rooms and thus was being baled and sold separately.

**FLAT STRIP WASTE CHECK** is being made as matter of routine by Stuart Hunter and Arthur Davidian of Wamsutta's laboratory; this check and the nep count are made at the same time.



Naturally, this study alone cleared up many of the obvious faults of the existing system. It helped reveal to some of the supervisors how their waste was being handled, such as five 20-minute trips of a waste handler to the boiler room each week instead of one 10-minute trip to the wastehouse.

**Attitude Towards Waste Disclosed in Study.** It showed us that the wrong attitude existed toward waste. It was not being recognized by all as an important manufacturing by-product—as an important and large source of revenue. The wastehouse, instead, was almost the central "wastebasket" of the mill. As a matter of fact, the revenue realized from waste sales at Wamsutta amounts to roughly $500,000 a year, which is not a bad net profit for a year.

Except for the obvious discrepancies between the production and waste departments, no actual changes were made until the

situation was thoroughly studied.

**Literature on Waste in TI.** There has been quite a bit written on the subject of cotton waste and its control, and at this point it paid to study some of this literature. Two of these were "Cotton Waste," published by the National Cotton Council*, and "Waste Reduction and Control"** by Ben Crawford which appeared in the October 1948 issue of TEXTILE INDUSTRIES.

**Reclassification of Waste Categories.** Conferences were held with representatives of several waste firms to get different opinions on classifying waste. The waste samples collected from the various processes were used for this purpose to find where it would be more economical to have separate classes and where more could be realized by combining waste classes.

Using the information thus obtained in conjunction with the approximate amounts of each, the various classes were then redefined—listing the sources of each. These classes were made flexible so that they could be changed as market conditions demanded—ie., when a similar class increased enough in value to warrant its separation, it could be done; whereas, when two separated similar classes began to yield the same and be sold together, they could be combined.

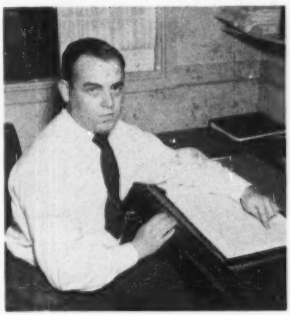
After this reclassification, it was found that where originally there had been over forty classes, there were now only about thirty, even though a few new ones had been created. One example of this is illustrated in Fig. 3.

Once the waste classes had been properly established and defined, the wastehouse and production departments had to be coordinated. Since there were now only about 30 classes of waste, including three of paper, and there were 23 wastehouse bins, fireproof partitions were built in a few of these bins. This allowed all waste to be stored in the bins and eliminated the use of trucks for storage purposes, thus freeing as many as 100 trucks without the worry of dirt or waste in the bottom of most roving trucks.

**Waste Bins Arranged Conveniently.** The bins themselves were rearranged so that those classes of waste baled most frequently would be stored closest to the press. Those which didn't occupy much volume were stored in the bins with partitions. Also, a few chutes were built at the tops of the bins to make for easier dumping of trucks. All bins were then carefully labeled with large stenciled signs, and no waste was allowed to come in at the second floor level of the wastehouse; it all had to come from the top to be weighed and dumped into the respective bins. All waste was to be handled in the wastehouse in this manner,

*Complete paper appeared in "Textile Research Journal;" extract in TEXTILE INDUSTRIES, Sept. 1950, page 128-131.
**Reprints available from the editors.


**ABOUT THE AUTHOR**
**Edward S. Rudnick**



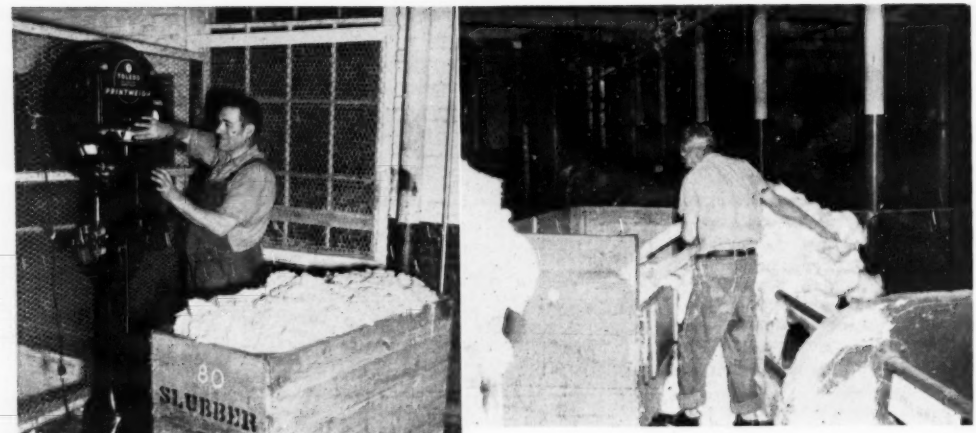
The author of this story of Wamsutta's waste control program is director of research at that plant; besides working on the program at his own mill, he assisted in setting up similar waste control programs at Crown Manufacturing Company and Lippitt Worsted Mills.

Mr. Rudnick received his general engineering degree at Tufts and his master's in textile technology at M. I. T.; then served two years in the Navy. Although a comparatively newcomer to TI's pages, this is not his first work for us (see February pages 130-131). He also has prepared technical articles for other journals and has made addresses via radio and to civic clubs. He is a regular attendant at many of the technical, quality control, and research meetings.


**OLD AND NEW CLASSIFICATIONS (Fig. 3).** Originally there were over forty categories; now about thirty. This typical example pertains to yarn waste; studies included other types.

Fig. 3.

| Nine Old Yarn Classes | Five New Yarn Classes (with sources) |
|---|---|
| 1. Cotton and Rayon Ply Threads | 1. Ply Thread<br>a. Cut from twister bobbins<br>b. Unsized section beams |
| 2. Mixed Colored Slasher | 2. Single Thread<br>a. Ring Cop (from filling strippers)<br>b. Cut from spinning<br>c. Cut from spoolers<br>d. Skeins from reeling and laboratory<br>e. Balls from section beams<br>f. Battery waste from weaving |
| 3. Mixed Skeins | 3. Colored Thread<br>a. Section beams<br>b. Loom beams<br>c. Ring cop (filling strippers)<br>d. Reeling |
| 4. Mixed Slasher | 4. Oily Thread |
| 5. Mixed Threads | 5. Slashed Yarn<br>a. Slashing<br>b. Drawing-In and Tying-In<br>c. Weaving |
| 6. Oily Threads | |
| 7. Ply Skeins | |
| 8. Ring Cop | |
| 9. Single Thread | |




**PRINT-WEIGHT SCALES (Fig. 4)** are used by waste handlers (left) before putting waste into proper bin (right). Waste handlers use printed tickets for each department and each classification of waste, are required to account for tare weight of truck.

including weave sweeps and miscellaneous paper which had previously been burned, so as to prevent waste "leakages."

Detailed printed instructions regarding the handling of each type of waste were issued to the production departments to tie them in with these wastehouse modifications. In the two years since this new handling system was put in effect, there has been only a negligible amount of deviation from it.

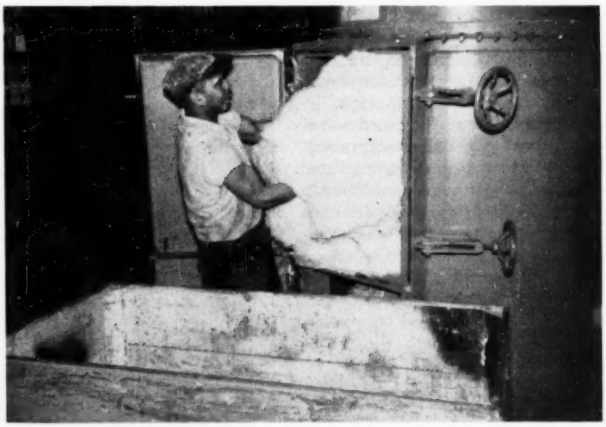
**Determining the Waste Quantities.** In order to set up the control system, the most important thing was to know exactly how much waste of each type was being produced in each department. An old platform scale was located and put at the main top floor entrance to the wastehouse with a wooden ramp leading to its platform. Each of the waste handlers was instructed by his secondhand or overseer that *all* the waste was to be weighed. Signs were mounted in the wastehouse entrances reminding them of this and explaining the method of reporting these weights.

It was feared at first that since over fifty different individuals bring waste to the wastehouse, they could not be relied upon to carry out this system. However, rather than hire two or three extra people just to do this round-the-clock weighing, we decided to try it with the individual waste men. Instead of the expected resentment and failure, we got almost 100% cooperation from these waste handlers.

*Even though it meant a little more work for them, it gave these men a sense of responsibility and importance so that they feel they are a part of this program now.*

After the success of this method of weighing departmental waste was demonstrated, a large automatic Print-Weight scale was purchased and recessed into the floor to make for more rapid and accurate weighings. (See Fig. 4.)

**WEIGHING CARD STRIPS.** Strips are removed from Abington collector located in waste house, placed in truck, and weighed; when weight is recorded, strips are placed in proper bin.



**How Waste Handlers Operate.** Waste tickets, such as those shown in Fig. 5, were made up for the reporting of these weights. The tickets are not only classified by waste type, but have a further breakdown by source. For instance, Pima Spinners' Stick Waste could come from two different spinning rooms, and since each room is controlled separately, the Pima Spinners' Stick Waste slip has lines to be checked off indicating whether it comes from No. 5 or No. 6 Spinning. Now that the waste wasn't being left in the trucks but was being dumped into the tops of the bins, the same trucks could be used for waste all the time. Thus, the tare weight of each of these trucks was painted on them and periodically checked.

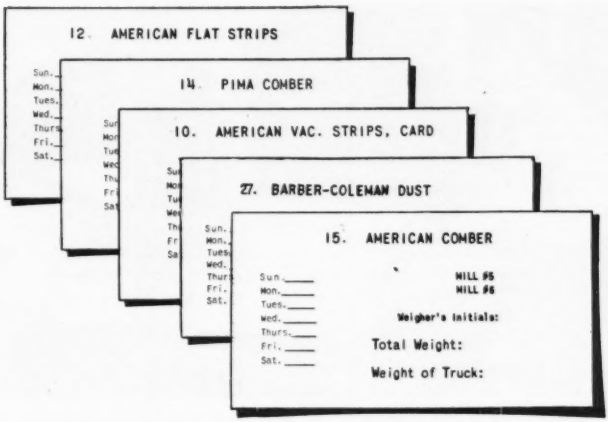
The various waste slips have a place for Gross Weight, which is obtained from the scale, and for Tare Weight of the truck. Also appearing on these slips is a line for each day of the week to be checked off by the waste handler so the waste can be ascertained on a daily basis whenever desired. Finally, there is a line for the weigher's initials which helps trace any errors in weighing and provides a psychological tool for more care in doing the work correctly.

In actual practice, the waste handler pushes his truck onto the platform scale as he enters the wastehouse. Adjacent to the scale is a table and a rack with sections —one section for each class of waste (see Fig. 6).

Each class of waste has a code number besides the class name on its slip, and although most of the men know which numbers are the slips for their waste, the complete list is mounted on the table. This list is reproduced in Fig. 5. Thus the waste handler takes one slip from the compartment which corresponds to his type of waste and records the Tare Weight and checks off the other information called for. With the original scale, he read the Gross Weight and recorded that on the slip, but with the Print-Weight scale, he merely inserts the slip in the scale as he would punch a time card. The slip is then left in a locked box with a slot in the top, fixed to the table.

Since in each three-shift day there are about 120 trucks of waste being brought to the wastehouse, the 120 slips are removed from the box daily and sorted according to the code numbers on the top of each. At the same time, any compartment whose slips are running low is refilled. After the entire week's slips have been collected, each category of waste is totaled by source.

The wastehandlers have purposely not been asked to record the Net Weights on each slip (by subtracting or by pre-setting the Tare Weight on the Print-Weight Scale), as it is easier to obtain the Net Weights of all the slips together.




**WASTE TICKETS (Fig. 5)** as used by waste handlers for reporting waste weighed-in. Below, a list of the waste tickets currently used at Wamsutta.

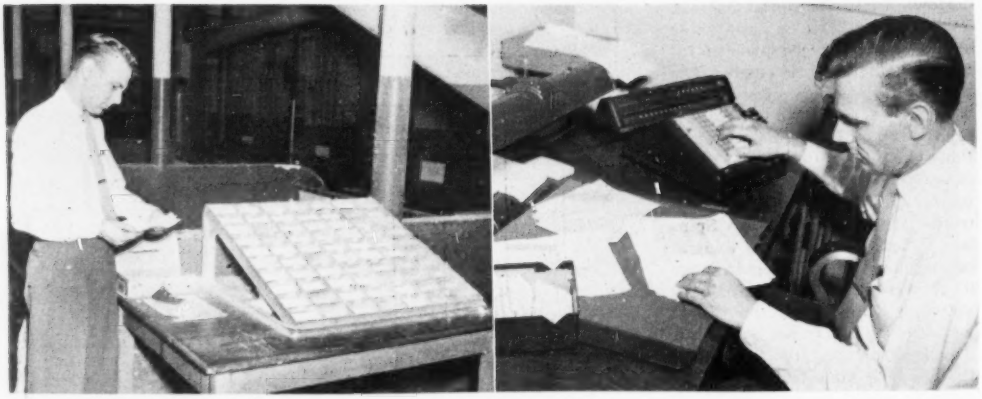
**LIST OF WASTE SLIPS**

**Salable Waste**

#3 Soiled & Damaged Cotton
#3A Opening & Picker Seeds (Karnak)
#3B Opening & Picker Seeds (American)
#5 Dust House
#6 Picker Sweeps
#7 Pima Card Fly
#9 Pima Vac. Strips
#10 American Vac. Strips
#11 Pima Flat Strips
#12 American Flat Strips
#13 Card Sweeps, Cards
#14 Pima Comber
#15 American Comber
#16 Clearer, Card Room
#17 Card Sweeps, Drawing
#18 Pima Spinners Stick Waste
#19 Amer. Spinners Stick Waste
#20 Clearer, Spinning
#21 Single Thread White, Spinning
#22 Spinning Sweeps
#24 Ply Thread, Twisting & Winding
#25 Colored Thread, Winding
#27 Barber Colman Dust
#28 Spooling & Winding Sweeps
#52 Single Yarn Waste, Winding
#53 B. C. Single Yarn Waste
#54 White Yarn, Reeling Room
#29 Slashed White
#30 Ply Thread
#31 Single Thread, Soft White Slash
#32 Colored Thread, Slasher
#35 Slasher Sweeps
#36 Weave Waste #4 and #5
#37 Weave Sweeps #4 and #5
#38 Weave Waste #6
#39 Weave Sweeps #6
#40 Weave Waste #7
#41 Weave Sweeps #7
#42 Ring Cop, #4, 5, 6, 7
#43 White Rags, Cloth Room
#44 Colored Rags, Cloth Room
#45 Cloth Room Sweeps
#46 White Rags Sheet Factory
#47 Colored Rags, Sheet Factory

**Reworkable Waste**

#100 Reworkable Picker Laps
#101 Reworkable Lap Waste, Cards
#102 Reworkable Card Sliver
#103 Reworkable Comber
#104 Reworkable Drawing
#105 Reworkable Roving



**RACK CONTAINS WASTE TICKETS (Fig. 6),** which are removed by waste handlers, inserted in Print-Weight scales, printed, and replaced in the slotted box. Here (left) Roland Roy, waste engineer, removes tickets and (right) adds them, calculating the tare weight and arriving at the net weight for each waste classification.

With a multi-bank adding machine the Tare Weights and Gross Weights are added simultaneously and the totals subtracted from each other to get the total net weight of the particular waste class, as illustrated in Fig. 6.

**Establishing Waste Standards.** Once the necessary figures of the amounts of each type of waste were being determined, a system of reporting these had to be adopted. Since Wamsutta's cost department is on a standard cost basis and weekly labor costs are compared with departmental standards on a Labormeter (originally set up by Barnes Textile Associates), a similar system was decided upon for the waste.

To tie it in with the familiar Labormeter, it was decided to call the weekly waste report the Wastemeter. However, before any such reports could be issued, the various departmental standards had to be established.

Each week the waste figures, which are in pounds of the various types from each department, are divided by the weekly departmental production figures to get the individual percentages. In the case of the weave rooms and cloth room, the production figures in yards have to be first converted to pounds by getting the breakdown by style and multiplying by the pounds per yard of the respective styles.

The slashing waste is based on pounds per set instead of a straight production basis, since there is a great variation in the length of the sets, but the number of sets is the main determinant of the waste.

**WASTE SEGREGATION** at spinning is observed by Harold King, departmental overseer; note compartments for clearer, roving, and lap waste.

**Overseers Share in Setting Standards.** After a couple of months, these weekly percentages were tabulated and averages obtained. The overseers were consulted individually and the figures discussed. Most overseers were asked to meet certain reduction goals, within a year, such as 5% or 10% on some classes of waste.

From the tabulation, they were shown how many of the previous weeks this goal had already been met. In each case, no standard was set until the respective overseer agreed that it was reasonable. Thus, each had a part in setting his standards.

At the same time, each was asked to list his suggestions for waste reduction and control which not only affected his department, but the mill in general.

Since then, the standards have been revised twice in a similar manner with much more waste

data to go by. During the last revision, no new goals were set, but instead the past year's averages were used as the standards. This assumes that once the system has been in operation successfully, those responsible will work just as hard to make a gain from standard as they will to reduce a loss.

**Cost of Waste Shown in $ $ $.** Not only are standard percentages set for each type of waste (based on the departmental productions, but dollar values are also determined for each, so that the differences between the actual and standard wastes can be expressed in dollar losses or gains. To do this, each time the waste standards are revised, current cost figures are obtained from the cost department

WAMSUTTA MILLS

WEEKLY WASTEMETER

Departmental Breakdown

FROM: STANDARDS DEPARTMENT

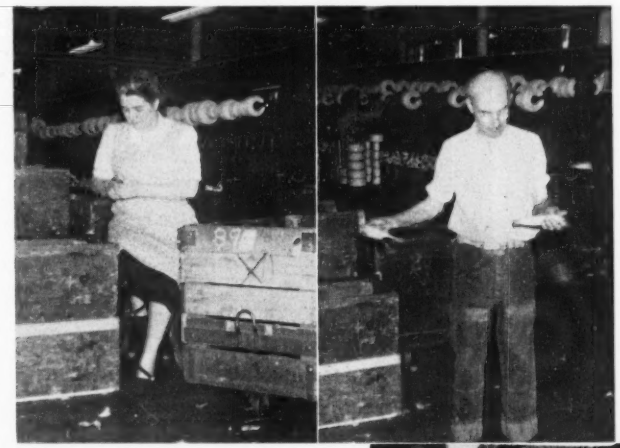
Week Ending February 9, 1952

| Department | Lbs. Entering | % Waste | Actual Waste | Standard Waste | Ratio | Gain from Std. | Loss from Std. |
|---|---|---|---|---|---|---|---|
| SALABLE WASTE (CONT.) | | | | | | | |
| 36 Spinning | 34,016 | | | | | | |
| Slubber | | 0.66% | 231 | 434 | 1.88 | | 10.00 |
| Cleaner | | 0.02% | 8 | 10 | 0.80 | 2.00 | |
| Sweeps | | 1.66% | 570 | 439 | 1.46 | | 103.00 |
| Single Thread | | 0.21% | 72 | 34 | 2.12 | | 29.00 |
| Barber-Colman Spooling & Warping | 77,329 | | | | | | |
| Cut and Reeled | | 0.73% | 565 | 472 | 1.20 | | 75.00 |
| Knotter | | 0.06% | 49 | 54 | 0.91 | 4.00 | |
| A.C. Dust | | 0.04% | 30 | 39 | 0.77 | 9.00 | |
| Sweeps | | 0.08% | 58 | 62 | 0.94 | 4.00 | |

**WEEKLY WASTE REPORT (Fig. 7)** breaks each department's waste down by category. Only a portion of the Wastemeter is shown here.

**The Weekly Waste Report.** The Weekly Waste Report breaks each department's waste down by category. A portion of this report showing the breakdown of two such departments (No. 6 Spinning and Barber-Colman Spooling and Warping) from one of these reports last February is reproduced in Fig. 7.

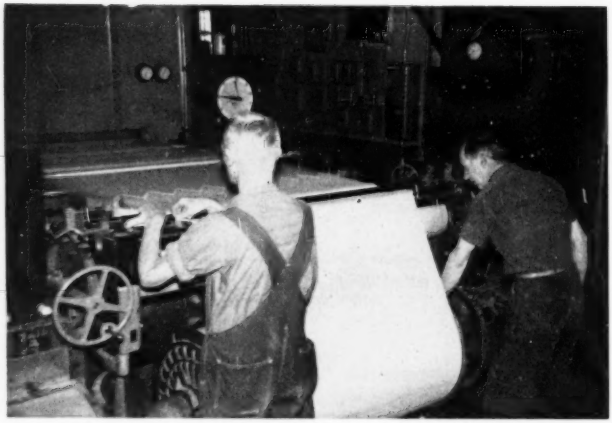
The numbers in the seven columns are self-explanatory. The percentages, based on the material entering the respective departments, are used mostly by the overseers, whereas the "front office" and cost department get a better overall picture in terms of the ratios between the actual and standard wastes, since according to the last revision of the standards, a ratio of 1.0 would indicate that the particular class of waste is



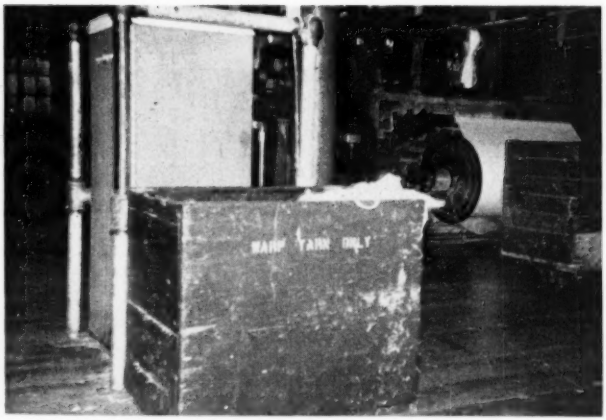
**WASTE AT SPOOLER** has been reduced. Left, yarn on tangled or damaged bobbins was cut off before the waste reduction program began; right, now all bobbins that can be salvaged are repaired.

**COMPARATIVE WASTE** at spoolers is pointed to with pride by Colby Benson, overseer. Here are only two small boxes of bobbins to be repaired; formerly the pile of boxes accumulating in the same length of time would have almost reached the ceiling.

of the average value of the material in each production stage (consisting of the accumulated material, labor, and overhead costs). The current return on each type of waste (salvage value) is also determined and subtracted from these costs to get the actual dollar loss per pound of each type of waste—to be used until the next revision.



**TYING-IN WASTE REDUCED** 300% by preceding process, slashing. The slasher tenders apply masking tape across yarn before doffing beam; one more layer of yarn will be put onto the beam and the knotters will tie right to the taped ends. The system reduced waste.



**WASTE SEPARATION.** Containers for waste in the weave rooms specify which type of waste is to be collected in which container.

**CHECKING ON WASTE PROMPTLY.** Roland Roy, waste engineer, and Eugene LaPlante, weaving overseer, check on a loom which is doffing quills containing too much yarn.

running the same as it has in the past. These ratios and percentages are not affected by fluctuations in the departmental production.

Although the last two columns are not necessary for control purposes, they receive more attention than the rest together. In any type of control, as soon as losses or gains can be expressed in dollars, they take on much more significance and command far more attention. Thus everyone from the president down to the waste men is interested in these dollar figures, and *they serve as a great impulse for waste reduction.*

The Wastemeter itself consists of five pages for these departmental breakdowns by category. They are printed and a supply of forms is maintained so that only the numerical values are "dittoed-in" differently each week. The waste engineer, in computing the weekly Wastemeter, has special worksheets on which also appear columns for the standard waste percentages (from which the standard waste figures are obtained), and the standard dollar losses per pound (by which the differences between the actual and standard figures are multiplied to obtain the dollar gains or losses from standard).

**Reworkable Waste is Expensive.** At this point it is necessary to

understand two important concepts which go along with this Wamsutta waste report. The first of these is the difference between the "salable" and "reworkable" waste. Reworkable waste is that waste which finds its way back into process again via the opening room. It is considered and controlled in the same manner as the salable waste, except on a separate page of the Wastemeter.

Many people have the mistaken idea that if the amount of reworkable waste does not affect quality, it does not matter since the material is eventually being utilized. However, this waste (in the form of over- or under-weight picker laps, card sliver, comber sliver, etc.) still has had applied to it the labor and overhead elements of cost plus a small amount of material cost due to more salable waste being removed the second time through. The further on in the process this type of waste is made, the higher its dollar loss per pound becomes as the value of this labor and overhead applied to the material increases.

The second concept is the distinction between "necessary" and "reduceable" waste. The waste taken out by certain cleaning machines falls in the "necessary" class. It is through this concept that the functions of the quality control and waste control departments overlap.

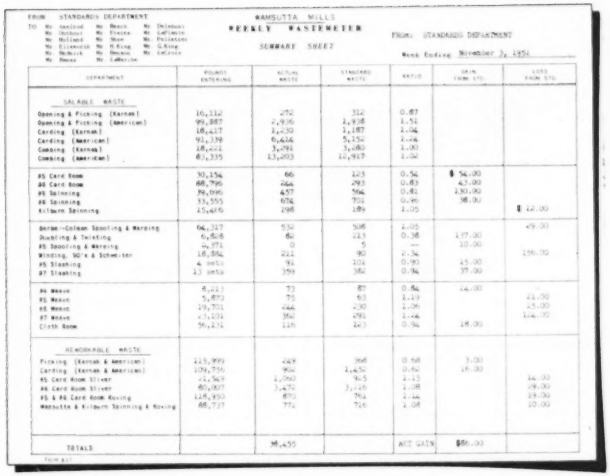
*Very large gains could be realized by simple machine adjustments which would reduce the percentage of card flat strips or comber noil, but these gains would be false if quality suffers. However, a happy medium can be struck by frequent checks of the waste at these points.*

For instance, we have found that an undetected rise of only 1% in comber noil percentage for a week can mean a loss of $200 on the Wastemeter.

With these two concepts in mind, the Wastemeter Summary Sheet can be observed, see Fig. 3. This sheet forms the first page of the weekly Wastemeter and summarizes the individual waste breakdowns of each department. Keep in mind that these figures apply only to one week of a particular mill and are reproduced here not for the purpose of revealing figures, but to indicate the method used of summarizing the waste.

Again the columns in Fig. 8 are self-explanatory. Note that when all the departmental wastes have been lumped together as on the Summary Sheet, no percentages are shown. All the figures are obtained from the departmental breakdown sheets.

All waste through combing is considered as the "necessary" waste, and as such no dollar values are shown for these items to distort the overall picture. Note also that the "Salable Waste" is listed separately from the "Re-

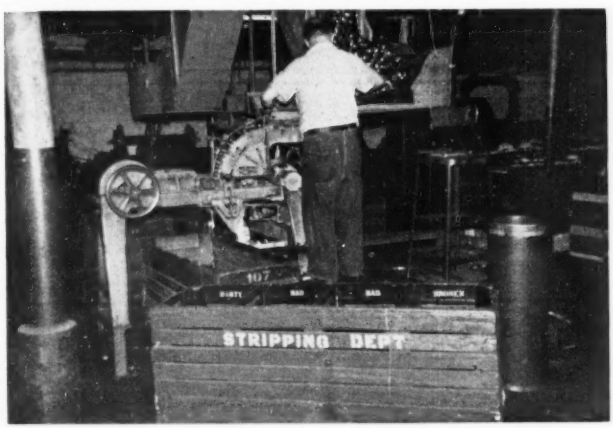


FROM: STANDARDS DEPARTMENT — WAMSUTTA MILLS — WEEKLY WASTEMETER — SUMMARY SHEET — FROM: STANDARDS DEPARTMENT — Week Ending: November 3, 1951

| DEPARTMENT | POUNDS ENTERING | ACTUAL WASTE | STANDARD WASTE | RATIO | GAIN FROM STD. | LOSS FROM STD. |
|---|---|---|---|---|---|---|
| SALABLE WASTE | | | | | | |
| Opening & Picking (Karnak) | 10,132 | 252 | 312 | 0.87 | | |
| Opening & Picking (American) | 99,887 | 2,976 | 3,408 | 1.51 | | |
| Carding (Karnak) | 18,417 | 1,430 | 1,187 | 1.04 | | |
| Carding (American) | 91,379 | 6,624 | 5,154 | 1.04 | | |
| Combing (Karnak) | 18,021 | 1,791 | 1,080 | 1.00 | | |
| Combing (American) | 81,335 | 13,003 | 12,917 | 1.00 | | |
| #5 Card Room | 30,154 | 66 | 123 | 0.54 | $ 54.00 | |
| #6 Card Room | 68,796 | 266 | 293 | 0.83 | 43.00 | |
| #5 Spinning | 34,096 | 457 | 506 | 0.81 | 130.00 | |
| #6 Spinning | 33,555 | 674 | 701 | 0.90 | 38.00 | |
| Kilburn Spinning | 15,476 | 298 | 184 | 1.05 | | $ 12.00 |
| Beam--Colman Spooling & Warping | 46,327 | 532 | 508 | 1.05 | | 49.00 |
| Doubling & Twisting | 6,868 | 82 | 123 | 0.58 | 177.00 | |
| #5 Spooling & Warping | 2,771 | 0 | 5 | --- | 10.00 | |
| Winding, 90's & Schweizer | 18,864 | 211 | 90 | 2.34 | | 156.00 |
| #5 Slashing | 4,955 | 91 | 106 | 0.90 | 15.00 | |
| #7 Slashing | 23,965 | 359 | 362 | 0.94 | 37.00 | |
| #4 Weave | 8,221 | 73 | 87 | 0.84 | 14.00 | |
| #5 Weave | 5,870 | 75 | 63 | 1.19 | | 12.00 |
| #6 Weave | 19,701 | 466 | 430 | 1.08 | | 25.00 |
| #7 Weave | 47,074 | 765 | 693 | 1.04 | | 144.00 |
| Cloth Room | 96,431 | 116 | 143 | 0.84 | 28.00 | |
| REWORKABLE WASTE | | | | | | |
| Picking (Karnak & American) | 115,999 | 249 | 368 | 0.68 | 3.00 | |
| Carding (Karnak & American) | 109,796 | 956 | 1,456 | 0.62 | 18.00 | |
| #5 Card Room Sliver | 21,569 | 1,060 | 965 | 1.13 | | 16.00 |
| #6 Card Room Sliver | 80,807 | 3,476 | 3,168 | 1.08 | | 48.00 |
| #5 & #6 Card Room Roving | 126,350 | 870 | 762 | 1.16 | | 19.00 |
| Wamsutta & Kilburn Spinning & Roving | 88,737 | 774 | 716 | 1.08 | | 10.00 |
| TOTALS | | 14,455 | | NET GAIN | $86.00 | |

**SUMMARY SHEET (Fig. 8)** of Wastemeter, prepared to summarize the individual waste breakdowns of each department. Here all departmental wastes have been lumped together.

**BOBBIN STRIPPER OPERATOR** picks out broken or full bobbins and sorts them for salvaging or scrapping. Note that box is built with partitions for segregating bobbins (and that stripping department will get its box back—name is painted on the side).



Messrs. Axelrod,
Oothout,
Holland,
Ellsworth,
Rudnick,
H. King,
C. Benson
H. Delahunt,
E. LaPlante,
J. Pelletier,
File

FROM: STANDARDS DEPARTMENT

WEEK ENDING: November 17, 1951

WEEKLY BAD FILLING REPORT

(Reported in Number of Bobbins)

REASONS

| | Dirty Bobbins | Bad Winding | Bad Spinning | Broken Bobbins | Total |
|---|---|---|---|---|---|
| #4 Weave | 35 | 8 | 30 | 10 | 83 |
| #5 Weave | 315 | -- | 210 | 214 | 739 |
| #6 Weave | 600 | 103 | 25 | 7 | 735 |
| #7 Weave | 128 | 18 | 30 | 77 | 253 |
| Total | 1,078 | 129 | 295 | 308 | 1,810 |

Average of Previous Weeks - 2,171

**WEEKLY BAD FILLING REPORT (Fig. 9)** summarizes the number of filling bobbins returned by the weave rooms for reeling or coning.

workable Waste." Mill totals for the week are shown for (1) the net dollar loss or gain, and (2) the total actual waste made.

**Distribution of Waste Reports.** The entire Wastemeter is distributed (with the Summary Sheet) within four days of the week being reported. It goes to the heads of all production departments plus any other department concerned with waste, the superintendents, general manager, and president. The latter individuals usually just scan the Summary Sheet and observe the breakdowns of only those departments which seem out-of-line.

The overseers are more interested in their own departments' breakdowns, but also like to see how their department stands in relation to the rest.

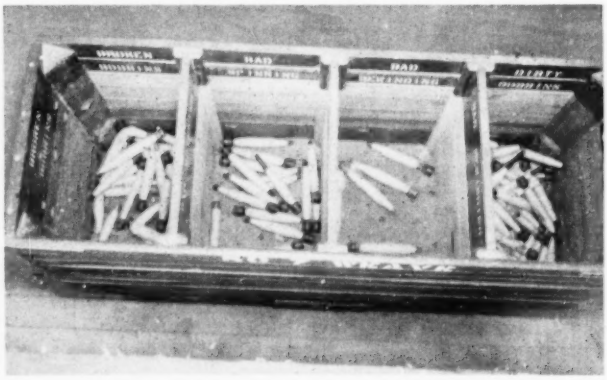
*This competitive spirit has in itself resulted in much interest in waste reduction by those responsible and capable of carrying it through.*

**Bad Filling Report.** Another report which is usually distributed with the Wastemeter is the Weekly Bad Filling Report, one of which is reproduced in Fig. 9. This report summarizes the number of filling bobbins returned by the weave rooms for reeling or coning.

The bobbins themselves are collected in special trucks with four sections, so they can be sorted according to defects as they are collected (see Figure 10). When these trucks are brought to the winding department the waste engineer makes careful estimates of the number of bobbins due to each defect. From these counts, this Weekly Bad Filling Report is made.

The horizontal totals on the Report indicate the number of bobbins returned due to "Dirty Bobbins," "Bad Winding," "Bad Spinning," and "Broken Bobbins." The vertical totals show how many were returned from each weave room. The total of these sums is the mill total and is compared with the average of all previous weeks.

This report is sent to those overseers concerned, and although it fluctuates with production, it is




**"BAD FILLING" TRUCK (Fig. 10)** is specially designed for collecting and sorting the filling according to defects. Waste engineer inspects truck and contents before making his report (Fig. 9).

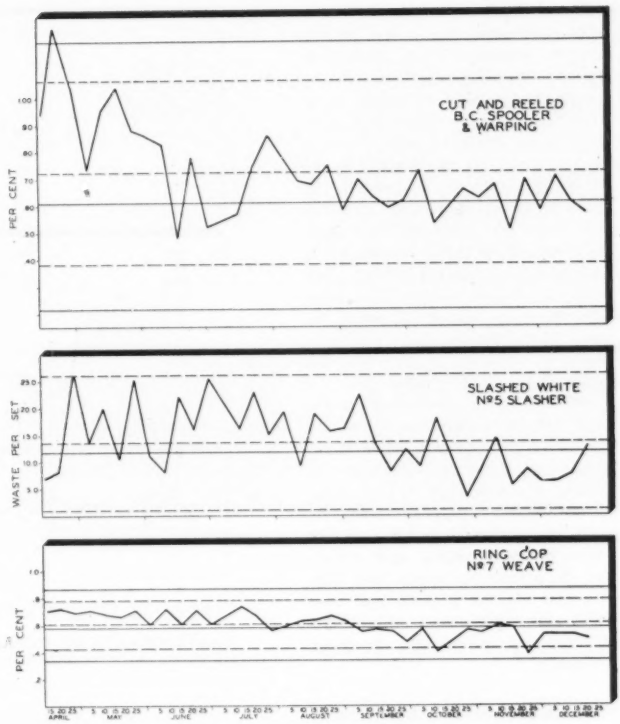
quite helpful in showing each how much bad filling he was responsible for. These figures are also used for ascertaining the amount of the waste due to bad filling to be apportioned to the spinning, winding, or weaving departments on the Wastemeter itself.

**Reduction of Waste.** After Wamsutta's formal waste program was set up by the quality control department and had been running for about eight months, it was turned over to the standards and methods department which is under the direction of Theodore Ellsworth.

*Waste control became a subdivision of the standards department headed by a full-time waste engineer, because the figures showed that such a person could easily pay for himself many times over.*

Besides the routine functions of the waste engineer of compiling all the data for the Wastemeters and Bad Filling Reports, he has the important function of finding ways to reduce the waste and to get the most return on that waste which is made.

**Waste Markets Followed.** To keep in close touch with the return being realized for the waste, he works hand-in-hand with the commission waste dealer and the billing department, keeping the former up to date on how much of each type of waste is on hand and watching the price fluctuations with each shipment. By keeping close to these price figures, he is able to decide when it is more economical to segregate certain classes and when it is not.




**WASTE CHARTS BY CATEGORY (Fig. 11)** are kept. They are based on percentages and include statistical control limits.

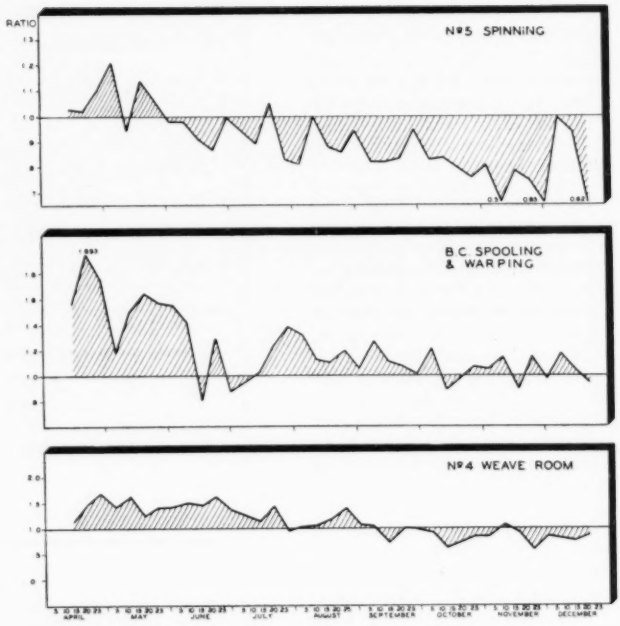
As for waste reduction itself, charts are kept of each category of waste. These are based on the waste percentages, so are not affected by the revisions in the standards. Some of these are reproduced in Fig. 11.

After sufficient data were collected from these charts to determine the week-to-week fluctuations of each, statistical control limits were computed to determine when the variation of a single week is normal and when it requires investigation.

**CLASSIFICATION OF RAG WASTE.** Rags which are too short to be sold as remnants are collected in bags according to their classification in the cloth room and then removed to the correct wastehouse bins. Shown here are racks for collection of the different styles and lengths.

**Waste Control Engineer Works with Overseer.** Since the waste control engineer has complete freedom in all production departments, he is able to study such items carefully to determine why they were high or why certain trends exist in particular waste categories. When a remedy is feasible, he applies it in conjunction with the particular overseer involved. With this freedom, he is constantly trouble-shooting for ways to reduce waste. This goes beyond those classes of waste in the Wastemeter and includes waste of material in general from an engineering approach.

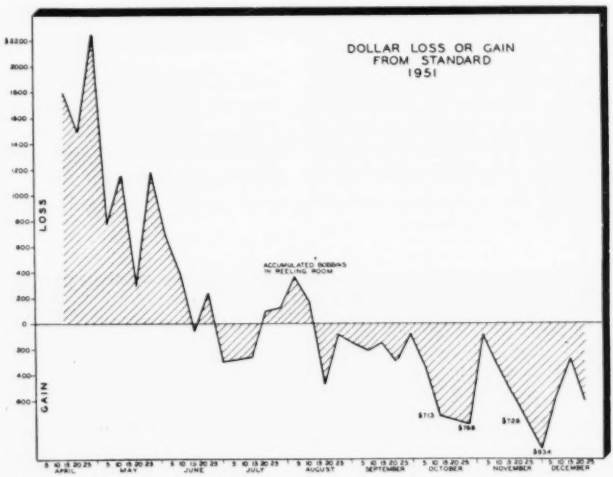
At the weekly overseers' meetings salient waste problems are discussed, particularly when these involve more than one department. Charts are also kept of the items on the weekly Summary Sheets for each department, based on the ratios between actual and standard departmental waste (see Fig. 12), and for the overall mill (see Fig. 13). Oftentimes these are shown and discussed at these meetings.




**WASTE CHARTS BY DEPARTMENT (Fig. 12)** are also kept; these are based on ratios of actual to standard waste.

**Waste Posters.** Another form of waste reduction has been by means of waste posters. Large, colorful, posters are placed in prominent locations of each department—about three to a department. Although they are worded differently, they all carry the same theme, "Lost! $50,000!!" Each has mounted on it a sample of the type of waste made in its department to hit closer to home. Fig. 14 illustrates one of them.

The object is to show the employees in each department the dollar value of the material they are handling and what a single pound of waste amounts to. In this respect they have been quite effective and help to push home visually what the second hands and overseers are emphasizing verbally.



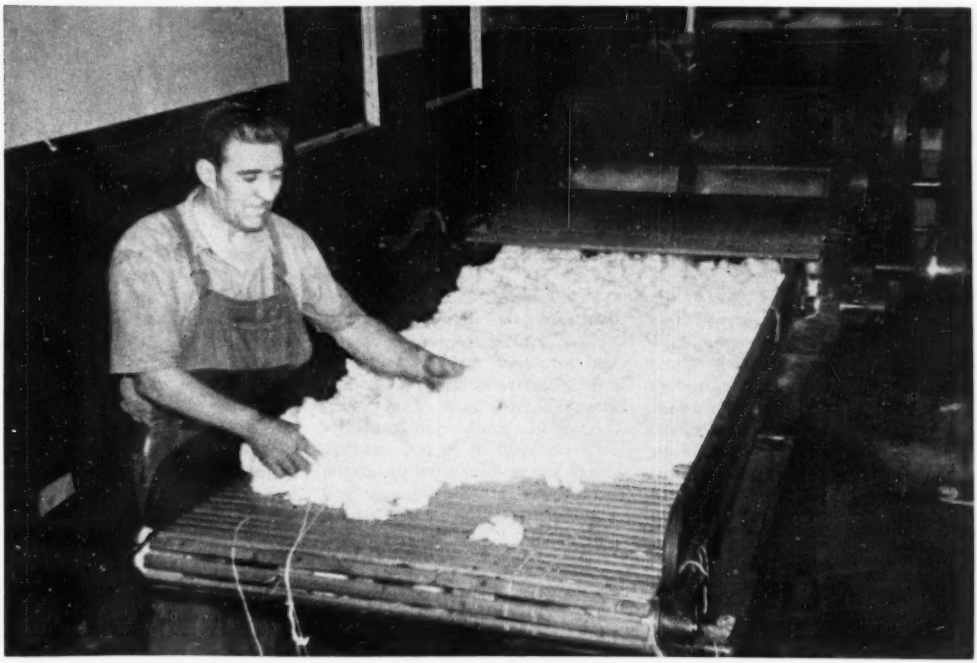

**OVERALL MILL CHARTS (Fig. 13)** on waste show dollar loss or gain from standard. This typical example is for Wamsutta's 1951 operations.

**Conclusion.** Although some waste items have shown no downward trends, many others have shown consistent improvement. The largest gains on all of these occurred within the first couple of months after the system was put in operation. Just setting up such a system and calling to people's attention the amounts of each type of waste being made in each department was a great impulse toward these initial gains. However, without the continued stress Wamsutta has put on this waste control through a full time waste engineer, such gains probably would

LOST!
$50,000!!
LOST!
$50,000!!
EACH YEAR WAMSUTTA LOSES THIS AMOUNT IN UNNECESSARY WASTE! CARELESSNESS ACCOUNTS FOR THE MAJOR PORTION OF THIS!
THIS COTTON COSTS 10¢ A LB. FOR SWEEPS WE GET 5¢ EVERY POUND THROWN ON THE FLOOR MEANS 45¢ LOST!
IF EACH WORKER PREVENTS ONE POUND A DAY FROM BEING WASTED IT WOULD SAVE 400 A WK. OR 20,000 A YR!
HELP TURN A LOSS INTO A PROFIT AND MAKE OUR JOBS MORE SECURE!
LETS ALL CO-OPERATE! IF YOU MUST MAKE WASTE, PUT IT IN ITS PROPER CAN.

**WASTE REDUCTION POSTERS (Fig. 14)** placed in each department apply specifically to problems in that department, are credited with keeping employees waste conscious.

**REWORKABLE WASTE** is run first through the waste picker and then carefully blended in correct proportions in waste hoppers on opening lines.



**AT WEEKLY OVERSEERS MEETING.** William Oothout, general manager, points out a significant trend on a waste chart.

changes on certain processes, but most are based on the old adage: "pennies and pennies make dollars."

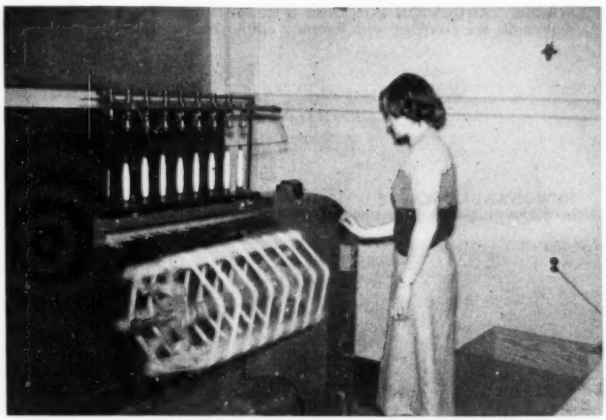
*As a direct result of this program, an entirely different attitude exists toward waste at Wamsutta. Waste is now an important by-product and source of revenue, yet every pound of "reduceable" waste prevented means considerable savings.*

The wastehouse is no longer the central "wastebasket" of the mill, but the storage and shipping point of these by-products. This change in human feelings has been the result of the waste control program, but has in itself been responsible for much of the program's success at Wamsutta.

have reverted to their initial conditions.

At the time of this writing, the charts and Wastemeter figures indicate that Wamsutta has realized a saving of over $2,000 a week or $100,000 a year since installing the waste control program. Several more thousands have also been saved in obtaining more for better waste classes, in the labor involved in handling waste, in floor space gained, and in getting a return on waste previously burned. These gains are not as easy to ascertain.

Most of the savings have been made by cooperation of those responsible all the way down the line. A few have been as a result of engineering or method



**STANDARD WEIGHTS** and hanks of waste bobbins are determined on laboratory skein reeler.

### *Political Responsibility*

*(ACMI Resolution)*

There has been demonstrated in some sectors of our national government a deplorable lack of sympathy toward, and understanding of, the basic principles upon which this nation's free enterprise economy is founded.

The existence of this situation is due, in part, to apathy on the part of business men toward politics and government.

As a result of their failure to participate more fully and zealously in the operation of government and the selection of honest and capable public officials, business men today are paying a heavy penalty in misunderstanding, misinterpretation, and wilful oppression of the competitive economy.

Members of the textile industry are urged to set examples for business men everywhere to abandon their aloofness toward politics . . . and to participate through the exercise of their franchise in the election to public office of those whose desire it is to see this nation grow so strong through the free functioning of its productive might that no aggressor can destroy our liberty and overthrow our way of life.

**W. A. L. SIBLEY,** newly elected president of the American Cotton Manufacturers Institute.

# Textile Men Expect Better Business

## *3rd annual ACMI meeting - Atlantic City*

*Staff Report*

BUSINESS bids fair to get better, and the chance is that this fall business will be good. The first opinion came from Charles C. Hertwig of Bibb, retiring president of the American Cotton Manufacturers Institute, at the annual meeting of the institute in Atlantic City May 15-17, and the second optimistic statement was voiced by William Burston of the National Retail Dry Goods Association.

Nearly seven hundred fifty textile men, suppliers, and their wives attended the third annual meeting, but representation from the South was smaller than anticipated. Next year the convention will be held at the Palm Beach (Fla.) Biltmore Hotel on March 26-28.

**Sibley Heads ACMI.** W. A. L. Sibley of Monarch Mills, Union, S. C., was elevated to president of the organization from his office as first vice-president, succeeding Mr. Hertwig; H. K. Hallett of Kendall, formerly second vice-president was elected first vice-president; and Russell B. Newton of Dan River Mills was elected second vice-president. Both Robert C. Jackson and F. S. Love were re-elected to their positions of executive vice-president and secretary-treasurer, respectively.

**Textile Motion Picture.** The assembled guests of the convention were shown the premiere of the new textile film entitled "The Greater Goal—Human Dividends from American Industry." It met with favorable response and acclaim from the audience.

The film is a project of the Textile Committee on Public Relations, work being undertaken by the Textile Information Service in response to requests from many mills, trade associations, and non-textile groups for an educational motion picture on the industry for showing in schools, colleges, clubs, business groups, and civic organizations.

Prints of the motion picture will be available for distribution through associations and individual mills.

**Hertwig on Business Conditions.** Mr. Hertwig, in the president's annual address, said he believes the industry has gone through its

### *You Benefit by This Program*

Textile Information Service, the organization serving under the Textile Committee on Public Relations, maintained an excellent exhibit at the ACMI convention. The exhibit consisted of news releases and special articles which had been prepared for the nation's press, accompanied by clippings from the press to show that the information furnished had been published.

The true story of the textile industry is getting across to the American public.

Maintenance of the public relations program is by voluntary mill subscription.

Although the entire industry benefits from the public relations program, only about half of the industry (on a spindle basis) supports it. The program could be expanded, with additional benefit to the industry, if maintenance and financial aid by the industry were on a broader basis.

The industry needs this worthwhile program; the program deserves your support.

Chairman of the committee is Charles A. Cannon of Cannon Mills Company; treasurer, Roger Milliken of Deering, Milliken & Company.—J. C. F.

blackest days and that "we've paid back the business we borrowed from the future in the last quarter of 1950 and the first quarter of 1951 [activity in those periods was at exceptionally high operating levels].

The speaker gave these facts to substantiate his inference that business must get better: Mill inventories have stopped their upward climb and have considerably lightened. Shipments in some segments of the industry have gained volume, and there are scattered indications of increasing buyer confidence. Buyers are less inclined to give instructions to "bill and hold."

Furthermore, retail inventories are no longer swollen and department store sales [during the then past month] have for the first time gone beyond the volume of last year.

Mr. Hertwig explained that mill prices were still at the extremely low points of the depression and that the ratio of cloth prices to cotton prices was the lowest in 20 years, with but two exceptions (July 1935 and July 1946). He said that in the transition from depression to recovery, price improvement is the last thing to occur, but he hoped for the better when the weight of excess goods is lifted from the primary markets and with the general recognition that production has come in line with normal demand.

"Although actual recovery in all its aspects is yet to come," he said, "I believe the stage has at least been set for its entrance."

**U. S. To Enter International Cotton Goods Conference.** The retiring president told of the planned participation by ACMI members and other organized textile groups in the International Cotton Goods Conference to be held in England beginning September 17, even though no sort of international agreement concerning production, imports, division of markets, or pricing policy could be made. Other countries involved will be England, Japan, and India. Participation is based on the hope that in an atmosphere of friendliness and constructive effort, voluntary acceptance by each country of policies which may alleviate textile problems will be aided.

**Economist Speaks to Labor and Management.** Edwin G. Nourse, a former chairman of the President's Economic Council, discussed economic trends as a whole, with little specific reference to cotton textiles. As he saw it, "The bone of contention between management and labor which is developing increasingly during 1952 and will come to acute stages when and as military expenditures drop, is between ability to pay and ability to keep business healthy and growing, primarily as a job-giving and wage-paying institution."

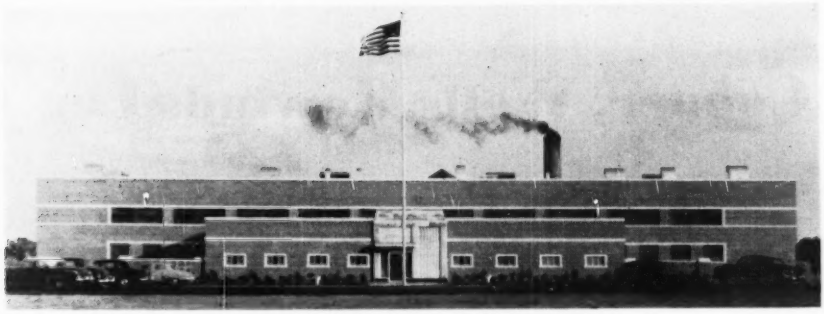
Dr. Nourse emphasized that such will necessitate vigorous, but frank and sincere, demonstration by management to labor negotiators of the need of maintaining plant, providing capital, and sustaining research. "That is," he said, "a difficult educational job, but it must be done from both sides if collective bargaining is to work. Both labor and management must be willing to face facts even when they are unpleasant."

**Doing Business with NYQMPA.** General R. P. Hollis, commanding, New York Quartermaster Procurement Agency, was unable to be specific in forecasting requirements for cotton goods in the fiscal year 1953; he did, however, describe some of the multifarious policies under which government procurement officers must operate. They are:

(1) Secure goods at lowest price in competitive bidding (2) police the clause in contract which forbids discrimination by contractor in hiring or promoting help (3) see that small business gets its share of government procurement (4) place orders in surplus labor areas, and (5) encourage subcontracting and be sure the actual manufacturing is done where the wages will go to alleviate the distress in areas where there is surplus labor (for awards under Defense Manpower Policy No. 4).

**To Mills Which Want to Export Only During Depression.** Speaking on the export outlook for cotton textiles, John Quirk of the National Foreign Trade Council told the members of ACMI that during a domestic recession in a line of goods, many inquiries are received from companies that have never been active in exports, but which despite their inexperience would like to get into the foreign field to move some excess inventories.

Mr. Quirk pointed out to such people that foreign trade, to be successful, must be conducted by experienced and competent tech-



## *Bishopville Finishing Plant To Handle Output of Reeves' Osage Mill*

This new synthetic fabrics finishing plant in Bishopville, S. C., has been officially designated as "The Bishopville Finishing Company, Division of Reeves Brothers, Inc."

Dedication ceremonies took place Tuesday afternoon at 3:00 P.M., June 3, 1952, at the main entrance of the building. Speeches were made by state dignitaries from South Carolina and by executives of Reeves Brothers from New York. A plaque was dedicated marking the completion of the newest of Reeves' three wholly-owned finishing plants. Approximately 1,500 townspeople attended the ceremonies. Refreshments followed guided tours of the new building.

At the dedication ceremonies, State Senator W. P. Baskin from Lee County pointed out the importance of this new Company in its local value to the community and as another step showing the progress South Carolina is making in the development of the synthetic fabrics industry.

Explaining why Bishopville was selected for a finishing plant, John M. Reeves, president of Reeves Bros., Inc., said the community has an abundance of intelligent inhabitants to draw on for personnel. The site is particularly adaptable for processing because of water and climate. It has excellent rail and trucking connections.

In addition, Mr. Reeves pointed out why Reeves Brothers was making this step. In order to maintain quality control and provide quick service to customers, the company has always favored an integrated mill operation.

The new Bishopville Finishing Division contains the most modern equipment and was engineered to finish all types of synthetic fabrics in widths up to 64". The brick and steel structure is completely air conditioned and is built for future expansion. It contains complete laboratory facilities to develop new finishes and to test output.

nicians for its long-range return and that spasmodic exporters might do themselves and the reputation of the export industry harm.

**Automotive Industry Large User of Textiles.** Galen B. Price of the Ford Motor Company advised that the automotive industry is one of the largest customers of textiles. From the standpoint of sales, textiles also play an important part in behalf of the automotive industry—stylewise. The price class of the car, he said, determines the percentage of wool used in the automobile—the higher the price the more wool.

He brought out that the automotive industry is closely watching textile developments, and his industry is subject to inspection and testing of anything that bids fair to be new and an improvement. Characteristics in textiles desired by automobile manufacturers are stability and flexibility of the fabric. He mentioned the possible use of third dimension weaves if they could be developed.

Senator Harry F. Byrd of Virginia was the featured speaker at the closing session of the meeting. He denounced high taxation as confiscatory, denounced the steel seizure by the government, and denounced the present administration. His audience had been denouncing the same things before he spoke, so was in complete agreement with practically everything he said. Comments following the Senator's address were to the effect that Washington could stand more men of his caliber.

Relaxation during the convention was adequately provided, following the main business sessions. On Thursday night the DuPont Company entertained at a party, followed on Friday night by an informal reception by the New York and New Orleans Cotton Exchanges. During the latter, McCall's Magazine presented a cotton style show.

# Cooper, Wells Rewinds Leg Yarns

***15 denier yarn is rewound from pirns onto plastic cylinders and effects an increase in full-fashioned hosiery production, more uniform hosiery lengths, and a reduction in press-offs.***

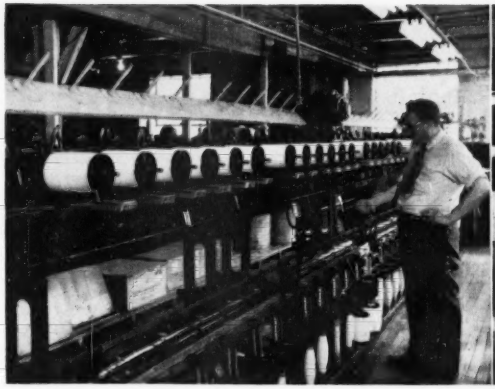
*Staff Prepared*

15 DENIER nylon leg yarn is rewound from pirns onto plastic cylinders at Cooper, Wells & Co., Decatur, Ala. The yarn is rewound to obtain more uniform tension before knitting. Less tension is applied to the nylon as it is wound onto the plastic cylinders, and precautions are taken to secure package uniformity.

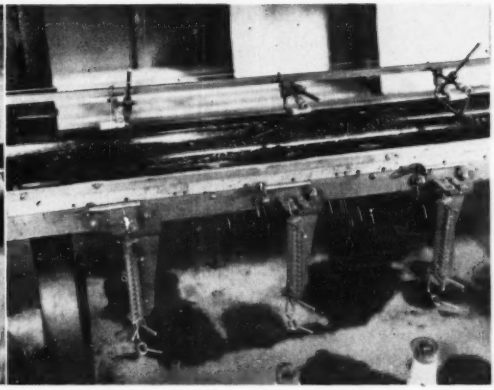
A Model 50 (Universal) converted sizing machine is used in the backwinding operation; however, the size troughs on the machine are allowed to remain inoperative. Rewinding has cut press-offs considerably, according to the management in Alabama's oldest full-fashioned hosiery mill. Production tests in this mill have shown that 80 doz were run on a machine operating on rewound yarn, as compared to 75 doz (in the same period of time) produced on a machine operating on pirn yarn. The knitters have expressed preference for the rewound yarn, an important factor in obtaining hign production and good quality.

Formerly one or two press-offs

**TENSOMETER** is used regularly to check tension and maintain uniformity in the rewinding operation. Less tension is applied to the nylon as it is rewound onto the plastic cylinders.



**MODEL 50 SIZING MACHINE** is used in the back-winding operation at Cooper, Wells. The size troughs remain on the machine, but they are inoperative. F. G. Yaney, plant manager, examines yarn.



**A TENSION INDICATOR** on each winding head shows whether tension varies at any time during winding. The indicators are set in relation to the horizontal wire which appears just above the indicator support bar.

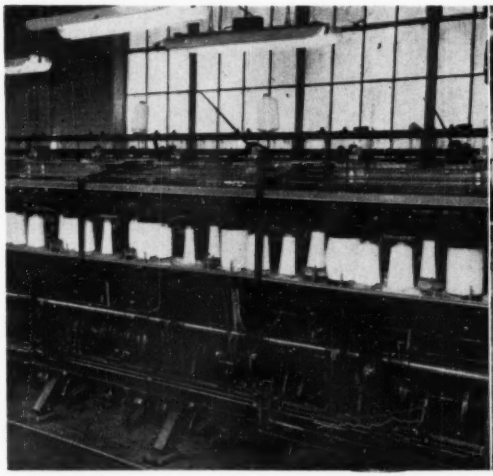
per set were not considered objectionable. In eight hours of current operation on one machine there is an average of three press-offs. The Reading machines are 51 gauge, 30-section units. Although pirns received by the mill are now better wound than formerly, rewound yarns produce more even hosiery lengths, according to the management at Cooper, Wells.

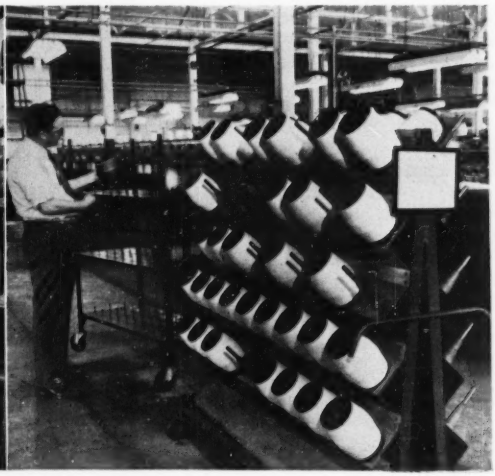
Several years ago in this plant, stocking lengths varied from 28″ to 32″. Variations as much as 5″ in hosiery lengths occurred. The present tolerance is 1″ variation in length, plus or minus. D. S. Hurst, general foreman, personally checks uniformity of stitch formation, yarn tension, and other details on all knitting machines. Six stockings per week from each machine are finished to check for correct length and for follow up, should machine adjustments be necessary.

A Sipp-Eastwood Tensometer is used regularly to check tension in the rewinding operation; furthermore each winding head has a tension indicator which shows whether tension varies at any time during winding. A rack was built especially to hold the cylinders of rewound yarn ready to replenish the supply when it is exhausted on the knitting machines.

**PLASTIC CYLINDERS OF NYLON** in place on the knitting machine. Note that only the leg yarns are rewound onto the plastic cylinders which may be easily distinguished.

**PORTABLE RACK** was specially built to hold the plastic cylinders of rewound yarn ready to replenish the supply when it is exhausted on the knitting machines.





# Guide to Wool Stock Bleaching

*Staff Prepared*

THERE ARE pecuniary advantages in store for the wool manufacturer who is able to expand the range of usability of a given lot of wool. One way to cash in is to bleach the raw stock. A simple and inexpensive means for doing so is by the peroxide dry-in bleach process carried on in the conventional scouring train.

By bleaching, shade variations common to wool stock are reduced, and some of the natural color is removed. These two propensities of raw wool often obstruct the dyer from producing pastel shades. In their absence or restraint, the dyer can obtain uniform, true, and bright colors.

Reflection tests show that medium color scoured wools will reflect about 40 per cent of the incident blue light. After a dry-in bleach of the wool, the figure is raised to about 45 to 50 per cent, depending on the amount of peroxide used. Here is how the wool dyer may interpret the "whiteness" values:

There is a limit to the number of shades that can be applied to a wool lot because bleaching does not decolorize the stock completely. The color of dry-in bleached wool varies from white to medium brown, depending on its original color. The lightest dye shades may call for reasonably light raw stock. A dark yellow wool may be converted to a light yellow base, making it satisfactory for dyeing those light shades which are often used on light yellow wools. Generally speaking, the increment of "whiteness" added by a bleach allows a wider spread in the selection of wools for a specific dye order.

**Scouring Train.** The dry-in bleach involves impregnation with hydrogen peroxide solution, followed by drying. The entire process can be conducted in a four-bowl scouring train, thereby offering the economies of a continuous operation without any further investment for machinery. The bleaching chemicals are added at the end of the scouring train. No after-wash is necessary.

Grover-Ferguson's four and five-bowl scouring trains were quickly adapted to the dry-in bleach treatment. In both trains, the final bowls are used for the bleach bath. These bowls are provided with separate overflow. Counterflow for the scouring bowls begins in the third and fourth bowls, respectively.

Carbonized wools are rinsed in the first bowl of a five-bowl train, full-strength scoured in the second bowl, soaped in the third bowl, and rinsed in the fourth bowl. It then passes to the bleach solution in the fifth bowl.

Grease wools are rinsed in the first bowl of a five-bowl train, followed by a full-strength scouring in the second bowl, a soaping in the third bowl, and a rinsing in the fourth bowl. In the fifth bowl, it is immersed in the bleach.

Wools low in grease content are processed in a four-bowl train where they receive full-scour in the first bowl, soaping in the second bowl, rinsing in the third bowl, and bleaching in the fourth bowl.

**Bleach Solution.** First of the possible pitfalls of which the

**SIMPLICITY OF DRY-IN BLEACH** process, demonstrated by Bob Hall, plant manager. A bucket and a barrel of hydrogen peroxide are the major requirements for an operation which increases the money value of raw wool stock.

# by the Peroxide Dry-In Method

**DRY-IN BLEACHING with hydrogen peroxide can broaden the range of shades a given lot of wool may be dyed. Conversely, various lots of wool which may otherwise have fallen outside the limits of acceptability may be dyed a given shade. The technique is simple; the expenses are negligible. In this article, see how Grover-Ferguson Company picks its way around the few pitfalls that may be encountered.**

processor must be wary, is encountered in the sulfuric acid content of the bleach solution. Before the acid can begin to catalyze the bleach reaction properly, it must first neutralize the small amount of alkali and detergent carried into the bleach solution by the rinsed wool. The most favorable acid condition for meeting these demands is a pH ranging from 3 to 5, or a titrable acidity measured at .01 N.

See that the solution is not excessively acid. If it is, a yellowish cast will appear in the wool after drying. A pH test of the water extract from a sample of the dry-in bleached wool is sometimes made by Grover-Ferguson's control technician in order to confirm the acid strength of solution. The extract should show a pH of around 6, which would indicate that the sulfuric acid in solution reaches a state of near equilibrium. A lower pH opens the door to fiber damage and an inferior bleach. Once the proper conditions of acidity are established, the rate of acid flow into solution is adjusted at a calibrated orifice to balance the rate of dissipation.

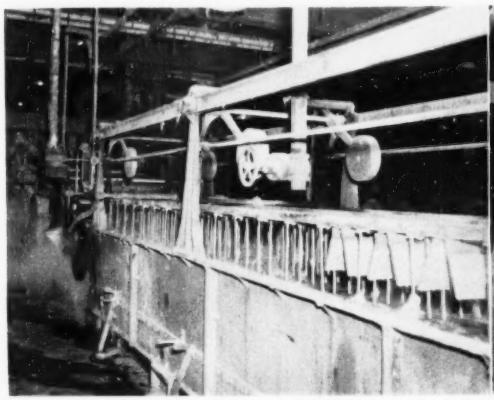
For the bleach agent, Grover-Ferguson uses Becco's 27.5% (100 volume) hydrogen peroxide (14 lb per 100 gallons of solution). The hydrogen peroxide content of the bleach bowl may vary between 0.3% and 0.9%, according to the degree of bleach desired. The train operator adds peroxide to the bath manually, and periodically makes a hydrometer check.

**Drying.** After immersion in the bleach solution, the stock is 40 per cent extracted in a pass through squeeze rolls and fed to the dryer apron at a rate of 800 to 1000 pounds an hour.

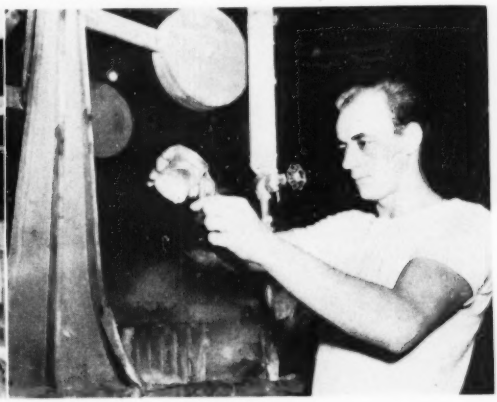
Color reversion in the bleached wool must be guarded against during drying. Beware of high temperatures. Drying should be carried out at low temperatures; 200 F for 5 to 7 minutes is recommended. Lower temperatures can be used over longer periods of time. You'll be on the safe side if the moisture content of the stock as it emerges from the dryer checks out between 10 and 20 per cent.

Most of the bleach occurs during the drying stage. Don't look for final results at the delivery end of the dryer. About 0.01 per cent peroxide remains in the stock

**FOUR- OR FIVE-BOWL** conventional scouring train and a dryer, similar to the installation at Grover-Ferguson as shown here, provide the means to expand the dyeing range of a given lot of wool.



**RAPID TITRATION** gives reasonably accurate control over the dry-in bleach process. Most plant personnel can perform this job. Monitoring the operation is Frank Urbanski, bowl operator at Grover-Ferguson.



## Campaign Launched to Alleviate Shortage of Engineers

A current critical shortage in the United States of engineering manpower for industry and the defense effort has prompted The Advertising Council to accept an advertising campaign to urge qualified high school students to consider engineering as a career. Request for the campaign came from the Engineering Manpower Commission of the Engineers Joint Council.

The present shortage of engineers is said to number 60,000. Industry alone needs a minimum of 30,000 new engineers a year for normal replacement and growth, the Council states. In a protracted national emergency it is estimated that the annual requirement to fill the needs of industry and government would be about 40,000.

As against these requirements, engineering graduates are expected to total approximately 28,000 in 1952; 19,000 in 1953; and 12,000 to 17,000 in 1954.

To help meet this situation, the Council's advertising campaign will point out to high school students and their parents the opportunities that exist in engineering today and in the years to come, and the advantages of engineering training in qualifying young men for positions of leadership in many fields.

The first phase of the campaign will consist of radio bulletin and house magazine support, and the preparation of advertising materials for use by companies with a direct interest in the problem.

after drying. This small residue perpetuates the bleach reaction during storage and further improves the "whiteness" of the stock.

**Color Reversion.** How the wool is handled after dry-in bleaching has a direct bearing on the ultimate effect of the bleach. For instance, if the small residue of peroxide in the stock is not dissipated before dyeing is undertaken, bleach results may be jeopardized.

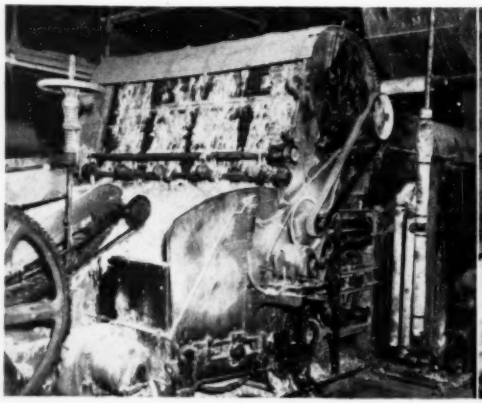
The peroxide residue may encourage an abnormal color reversion of the wool during dyeing that would leave the bleached wool duller and yellower than its unbleached counterpart. Also, wool dyestuffs are subject to attack by peroxide.

Ageing the bleached wool before dyeing is probably the simplest expedient for avoiding reversion difficulties. Permit the bleached stock to condition in bins for a reasonable period of time before baling or dyeing. Packing of wools in the bale interferes with ageing and sets up a barrier against the liberation of oxygen from the bale and the decomposition of peroxide in the stock.

In dyeing, bright and pastel colors need special consideration of the color reversion factor. Dyeing time should be kept to a minimum for these shades. Dye at the lowest practicable temperature. Wool normally darkens at the boil. It is particularly susceptible to darkening when peroxide is present. For many wool dyestuffs, 180 F is a satisfactory dyeing temperature. Above this temperature, the dyer is inviting trouble.

As a final precaution against color reversion, the dyer may add 0.1 per cent reducing agent (on weight of wool) to the dyebath. Sodium hydrosulfite serves the purpose well. The enzyme, Catalase, applied 0.2 per cent (on weight of wool) in a separate bath and followed by a rinse has the same result.

**DRY-IN BLEACH** process has all the advantages of a continuous high speed operation. Here, the stock is passed on to the dryer after scouring and immersion in the bleach solution.



**TEN TO TWENTY PER CENT** moisture content in the stock after emerging from the dryer is considered satisfactory. Here, Thomas Donovan, plant superintendent, examines bleached wool as it is blown to pickers.

***For mills with cotton type equipment***

# Suggestions for Spinning Nylon

***Major problem is control of neps; however excellent yarn is being produced on cotton machinery in several North Carolina Mills.***

*Staff Prepared*

A GOOD job of spinning staple nylon can be done on cotton processing equipment, but it is helpful to make changes in settings, speeds, and machines to compensate for the difference in the character of the fiber. The changes may be handled easily in the mill or in a local machine shop.

According to the executives of a mill in North Carolina, where considerable experimental work was done several years ago on nylon spinning, the problem is less one of mechanical methods than of an adequate raw material supply. They found they could, after a lot of work and worry, do a good job of processing, but they could not get enough staple nylon to keep the mill running. It was because of this supply situation that they got out of the field, but several other mills in the area are still spinning nylon and finding a ready market for their yarns.

It is generally agreed that a better yarn—that is, a yarn freer of neps—can be spun from nylon which is cut on a Pacific Converter and put through a pin drafting process than can be spun from staple nylon processed on a picker and a card. However, most of the mills visited in the Carolina area are using the cotton system because they already have conventional equipment.

The major problem, so far as quality is concerned, is the control of neps, but in spite of them, excellent yarn is being produced.

There is no doubt about the neps being in the mill, and experience indicates that most of them are made in the card.

**Blending and Picking.** As most men who have had experience with synthetics know, it is not only the natural fibers which vary in running characteristics from bale to bale. The synthetics vary too, and nylon is no exception. Some men feel it is safer to blend in much the same manner as cotton.

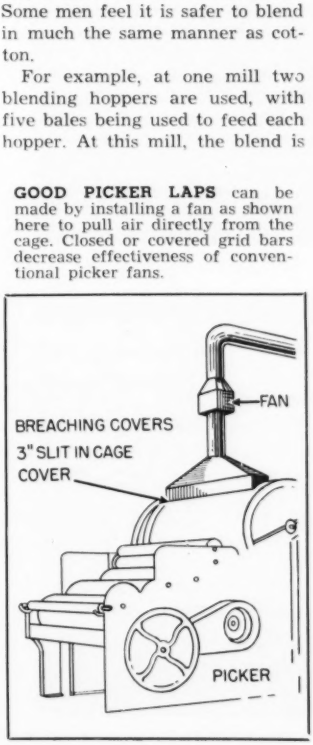
For example, at one mill two blending hoppers are used, with five bales being used to feed each hopper. At this mill, the blend is made up of bales from different lots, ten different lot numbers being represented in the blend.

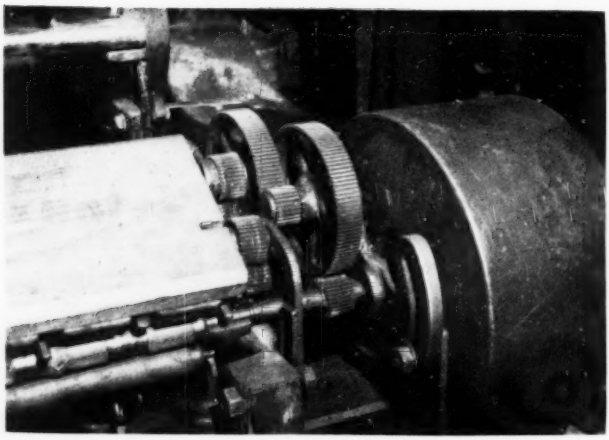
On the other hand, two other mills found it better to blend bales from the same lot, making no attempt to blend one lot with another. No attempt is made to keep lots separated all through processing by tailing-out, but only bales of the same lot are blended in the picker room.

Each of the three mills, on which this discussion is based, used two-process picking. The same job can be done equally as well on a one-process picker it was said; it just happens that two-process equipment was available. The mills also found that it is necessary to speed up the feed roll slightly on both stages, for it is a characteristic of nylon to hang back and pucker somewhat if the speed relationship between the apron rolls and the feed roll is the same as that used for cotton. Mills have at times had trouble forming a good picker lap.

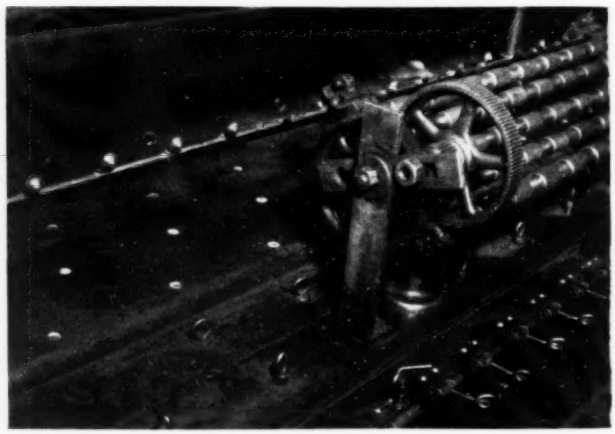
Also, since there is no trash to be removed, the grid bars should be completely closed or a metal cover placed over them. This is necessary to prevent the waste of good fiber through the bars, but it also brings about another problem. With the grid bars closed and a sheet of metal covering them, the fan is much less effective, and the fibers may not hold properly

**GOOD PICKER LAPS** can be made by installing a fan as shown here to pull air directly from the cage. Closed or covered grid bars decrease effectiveness of conventional picker fans.

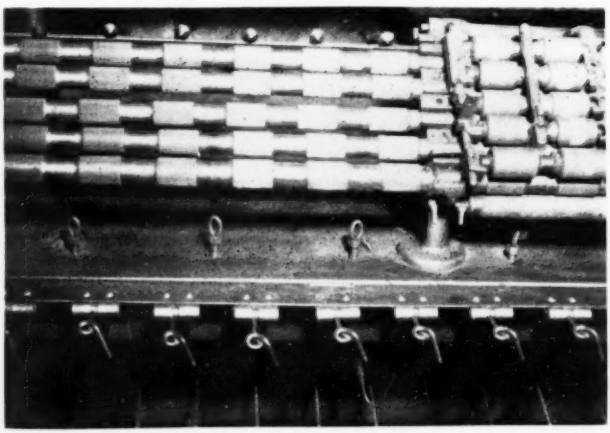




**HEAD END** of five-roll spinning frame showing gearing changes.



**FOOT END** of frame showing gears added to drive two front rolls.



**ROLL ARRANGEMENT** for running staple nylon on five-roll frame.

against the screen and form a lap

To overcome the problem, one mill found it necessary to add another fan to pull air directly from the cage. The drawing [on page 91] shows how the extra fan was added. A slit was cut in the cage cover across its full width, the slit being about 3 in. wide. Metal breaching was placed over this and formed into a duct above the picker. A standard picker fan was installed to give an induced draft. This fan, driven from the beater shaft, pulled enough air from the cage to lay up a good lap.

Standard Kirschner beaters are used, and no changes in speeds were made other than the slight change in feed roll speed mentioned. At one mill the breaker picker was adjusted to give an 8-oz lap, and six of these laps were fed to the finisher, which produced a 48-yd, 12-oz lap. Another mill produced a 10-oz lap on the breaker, feeding four of these to the finisher.

The lap produced is much better looking than a cotton lap from the same equipment. It is believed that the important factor is lap weight. It should be kept very light on the breaker picker, and it is suggested that light laps be produced when one-process pickers are used.

These mills use 1½ denier nylon mostly 1½-in. staple, and the end product is 80s and 100s yarn. Some 3-in. staple was run in one of the mills, using the same equipment, and a very good quality yarn produced.

**Carding.** The most important change made in the cards is the addition of a fancy to pull the fibers away from the wire on the cylinder to permit easy doffing. The fancy is placed in the brackets designed to hold the grinder, and the stripper door is removed. The fancy runs at 1300 - 1900 rpm and is driven from the main cylinder shaft through an auxiliary pulley in the same manner as a stripper. While the card is in operation, the fancy may be adjusted by moving it in toward the cylinder until the fibers are lifted out from the card clothing by the action of the teeth on the fancy.

A rayon licker-in has been found best for running nylon.

Licker-in speeds range from 360 rpm at one mill to 250 rpm at another; all of the mills established 165 rpm as the cylinder speed. Some mills also recommend the use of a long nose feed plate.

On the card, just as on the picker, a change has to be made in feed to avoid puckering. In this instance, the speed of the feed roll is kept the same and the lap roll speed slightly reduced.

The cards with 360 rpm licker-in speed produced about 3¾ lb per hour of 38-grain sliver, and the flats produced about 7½ per cent strips. All of them were put back into process. Some mills card much faster—almost twice as much.

One mill, which is now running well and spinning a good yarn, claims that running strips is not wise when high counts are being spun. The flat strips have a high nep count, and running them back through puts all of the neps back into the yarn. They re-run the flat strips, but only for use in low count yarns, such as 20s and 30s, where the neps do not show up as much as in the high counts.

Static is sometimes a problem in carding, and one mill has found it advantageous to use a static eliminator above the doffer.

**Drawing.** It does not seem that drawing is any particular problem on nylon in these mills. It is being successfully drawn on several roll arrangements. It is necessary to use anti-static rolls or static eliminators (or both) on the frames. It was found that a good anti-static roll could be made by using rubber rolls covered with leather cots. Several other commercial anti-static rolls have also been used successfully.

The calender rolls ahead of the coiler head may have to be speeded slightly, again to avoid the puckering, and all of these mills use spring bottom cans.

On two-stage drawing, a draft of 5½ to 6 is used on each stage.

One mill used four stages of fly frames — slubber, intermediate, roving, and jack. Another used only three stages. In both instances a 12-hank roving was produced, the final product having a twist of 1.10 in the first instance and .90 in the second. It will be noted that both twists are very light for roving of this weight. The light twist is necessary for successful spinning.

**Spinning.** It is at the spinning frame that these mills ran into the most serious trouble. Conventional roll arrangements at these mills have not worked well on nylon. One mill is using long draft spinning frames. Another mill found the Washburn roll system very satisfactory with the second roll set back ⅛ in. from the front roll. All the weighted rolls were weighted more heavily than for cotton.

Another special design was favored by the third mill. The design employs five top and five bottom rolls, with only the front and back rolls weighted. The three rolls at the back are driven in the usual way, and another gear box is added at the other end of the frame to drive the two front rolls. The design was developed by Mr. Friday and Mr. Stillwell of Gaston Textile Parts, Dallas, N. C., and it has been used on 1½-in. as well as 3-in. staple nylon.

The management of this mill thinks the frame is ideal for this type of work. As set up for running nylon, it gave a total draft of 13.33, most of this draft being between the first and second rolls. The frames use 1½-in. rings and 7-in. bobbins. The spindles are driven at 8500 rpm.

One of the mills also recommended the use of light, square-end travelers.

**Other Factors.** One mill suggested a relative humidity of 60% and a temperature of 85 F. Another preferred 65% rh and 80 F. Since none of the mills had refrigerated air conditioning, maintenance of ideal conditions was frequently difficult.

All of the mills agreed that the heavier the denier of the nylon, the easier it is to run. One of the difficulties in running nylon staple arises from the fact that it is not always cut properly before being baled, according to some sources. Often 3-in., and sometimes 6-in. lengths are found in bales of 1½-in. stock. When these long fibers go through drawing and spinning, they break as they pass through the rolls and spring back to form neps and tangles.

Of course, any mill starting out to run nylon will come across many problems other than those mentioned and will have to solve them with its own mill conditions as the background. However, the methods used by these mills will help in setting up a successful process.

## *Instrument Developed For Observing Dyeing Phenomena*

A method for observing the appearance and behavior of textile fibers and the dye bath during the continuous and complete dyeing cycle is described in Calco Technical Bulletin No. 825 "Microscopical Dyeing Phenomena Studies with the Microdyeoscope" by H. E. Millson and L. H. Turl.

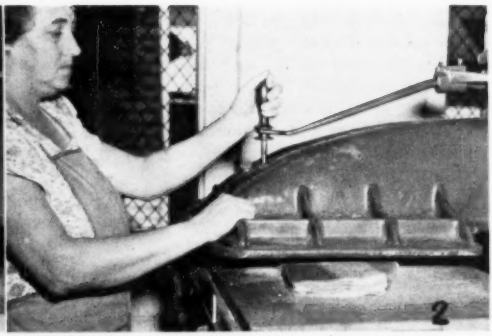
The Microdyeoscope, developed by the authors, is said to permit both visual and photographic observation of dyeing phenomena approximating conditions encountered in the usual commercial dyeing process. This instrument and several dyeing studies carried out with its aid are described.

Besides providing means for control of all factors believed important in the dyeing process, the instrument permits continuous microscopic examination of the same fiber or fibers at all stages of the operation, including wet processes either preceding or following the dyeing cycle, it is claimed.

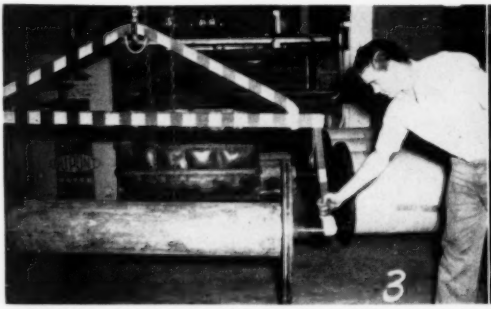
The device is not manufactured as a unit. A list of suppliers of parts from which the Microdyeoscope may be assembled are named in the bulletin which is available upon request to American Cyanamid Company, Calco Chemical Division, Bound Brook, N. J.

# Photos Show Carpet Mill Folks

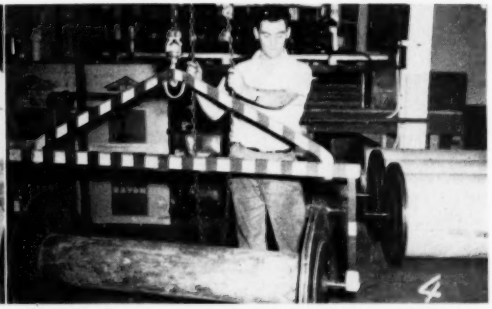
**WRONG**—Don't press woolens while hand is under mangle.



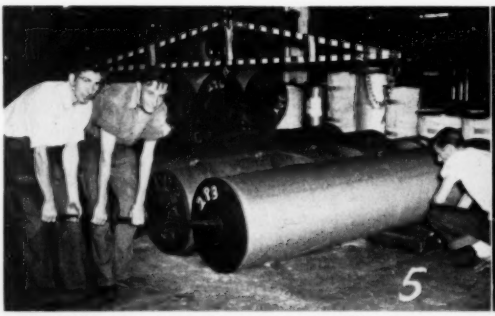
**RIGHT**—Hand over mangle, no mangled hand.



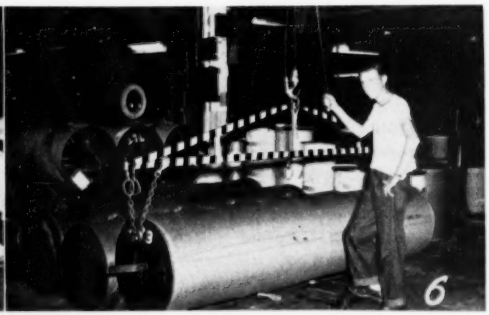
**WRONG**—Don't remove beam hangers before beam is at rest on floor.



**RIGHT**—Rest beam on floor before disengaging from straddle.



**WRONG**—The old-fashioned way to lift a beam required at least three men and was hazardous.



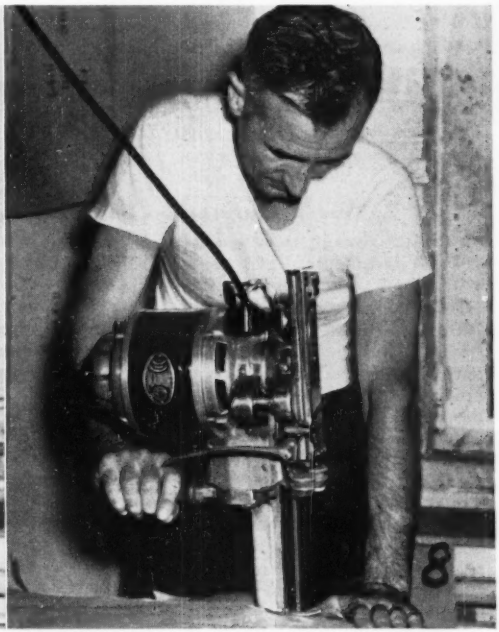
**RIGHT**—The new way employs an electric hoist, is safe, and saves labor.

# the Safe Way to Do Their Jobs

***No. 2 of a series (the first appeared in TI for September, 1951).***

*Photos reproduced by permission of C. H. Masland & Sons*

**WRONG**—Electric knife is dangerous with blade guard up.



**RIGHT**—Guard down and the operator is on guard.

**WRONG**—Never repair a machine while electric current is on.

**RIGHT**—Disconnect electric plug before making adjustments or repairs.

Reviews Investigations Explorations Surveys Analyses

# Fiber Strength and Yarn Strength

***Test interpretations improved by knowledge of fiber differences.***

**PREDICTION of yarn strength from fiber strength depends partly on testing method; selection of longer fibers from a sample can bias results of strength test; greatest yarn and fabric strength obtained when fibers elongate together; optimum twist may not be same on different cottons.**

**By JAMES N. GRANT**
*Southern Regional Research Laboratory**
*New Orleans, La.*

DISCREPANCIES between the actual strength of yarns produced from cotton and the strength predicted from fiber tests by existing methods are not uncommon. The causes are not fully understood, but they are highly important to the manufacturer who must meet specifications in a textile yarn or fabric. The more rigid the specifications, the more essential it is to select the most suitable cotton available for the purpose.

Although the reliability with which the strength of yarns can be predicted from the strength of the fibers used is known to depend partly upon the method employed in testing, the variability in properties of the individual fibers and the resulting influence on the strength of yarn and fabric must also be considered. These differences are not evaluated by existing test methods, but evidence of their importance is accumulating as a result of studies by a number of research organizations.

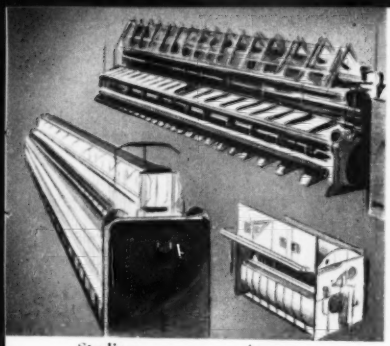
Part of the fundamental research on cotton at the Southern Regional Research Laboratory is directed toward obtaining, interpreting, and utilizing new knowledge to make fiber tests a more reliable guide to product quality.

In this research, fibers with a wide range in several of the measured physical properties have been examined for differences in tensile properties. The measurements of strength and the relation of these values to other properties of the fiber and to the methods used to measure the properties have been reported in a series of articles in the "Textile Research Journal"[1].

These articles and additional information obtained recently provide the basis for a better understanding of the characteristics of fibers as they are related to the characteristics of the products made from them. They show that cottons are almost as individual in fiber characteristics as human beings are in personality. A great deal of information about the variations in American cottons has been obtained, along with indications that certain practices in test-

*One of the Laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

[1]These articles are:
Endurance of Cotton Tire Cords and Fibers Under Static Tensioning. Enoch Karrer, et al., Textile Research Journal 17, June 1947, p. 314.
Relation of Specific Strength of Cotton Fibers to Fiber Length and Testing Method. James N. Grant, et al., Textile Research Journal 18, August 1948, p. 481.
The Relation of Length to Other Physical Properties of Cotton Fibers. Ora W. Mortier, et al., Textile Research Journal 21, January 1951, p. 6.



Studies Assays

ing can be modified to give more useful measurements.

**Longer Fibers and Strength.** For example, it was shown that the common practice of selecting the longer fibers from a sample, because they are easier to handle, can seriously bias the results of a strength test and thus prevent an accurate prediction of yarn or fabric strength from the results of the fiber test. With few exceptions, the strength of long fibers was found to be greater than that of short fibers in the same sample.

Since the proportion of long fibers selected is apt to be greatest when short staple cottons are being tested (sometimes with such cottons the longer fibers from the sample are used exclusively), the danger of error is greater with these varieties than in the testing of longer staple cottons where the shorter fibers in a sample may be sufficiently long to handle conveniently.

**Importance of Fiber Elongation-at-Break to Manufacturer.** The distinct individuality of cottons is well illustrated in the results of the Laboratory's study of the elongation-at-break characteristic in American upland cottons. This characteristic of the individual fibers as a factor in bundle or yarn strength is given little consideration in existing test methods. In its evaluation of fiber properties, however, the Southern Laboratory found wide variations in the ability of individual fibers to elongate. There was also a significant difference in the average elongation-at-break of fibers of different varieties.

This information is important to the textile manufacturer since the greatest strength in yarn and fabric is obtained when fibers elongate together and reach their maximum elongation simultaneously. If the elongation of the fibers used in a product is significantly different, the product will be weak. The fibers would break in a series of ruptures, as in the tearing of a fabric.

While it may be difficult to obtain samples of cotton that are strictly uniform with respect to the elongation-at-break characteristics of the individual fibers, mill men can definitely lessen the variations in mixtures if they have better information on the characteristics of the cottons they buy.

**Optimum Twist.** Obviously, fiber properties alone do not account for the quality of manufactured products. Processing procedures also count. For example, textile men know how the strength of cotton yarns is improved by applying greater twist. Beyond an optimum twist, however, the shear forces between fibers, which cause them to rupture, counteract any gain in strength obtained by the twist. Increasing twist is, in effect, the result of binding fibers closer together and at shorter length intervals on the fiber. As the length of the bound section is shortened, the load required to break the fibers becomes greater.

In the studies under review this characteristic of cotton yarns has been related to a similar characteristic of the fiber itself. Fibers, either singly or in bundles, were clamped in the testing machine in such a manner that a controlled length was under stress. Then gradually the length of the test specimen was reduced. As the portion of the fiber under stress became shorter, the breaking load increased. Here again, cottons varied—the increase was not the same for all varieties.

This means that considerable variation may be expected in the effect of twist on the strength of yarns produced from different cottons. Cottons showing the same strength in tightly twisted yarns—that is, where the length of the bound section is short—may be quite different if the twist is loose and the bound section of the fiber correspondingly long. Thus, it is impossible to predict accurately the strength of yarns even if precise information is available on the strength of the fiber, without knowing the amount of twist that is to be applied and the effect of the twist on the particular cotton used.

Studies now are under way to determine the exact length portion of different fibers that should be placed under stress during the test to obtain strength readings that will predict more accurately the strength of yarns with a given twist.

Although additional information along these same lines is being sought, enough is now known to permit more intelligent interpretation of the results obtained by present testing methods and to spur interest in the development and use of improved methods to permit the maximum use of each fiber property and to foretell the possibilities and limitations of different cottons.

This trend is evident in the increased use of high precision instruments in the testing of cotton during recent years and in research under way by a number of organizations to develop even more accurate and reliable instruments and more informative test methods. Much progress has been made, but there is still a long way to go before it will be possible to tell exactly the quality of yarn or fabric that can be produced from any given lot of cotton, or vice versa, the exact cotton or mixture of cottons needed to produce products of a specified, entirely uniform, quality.

The information obtained so far is making it possible to separate the factors responsible for differences in the characteristics of cottons. As the work progresses and the performance of cottons is evaluated in textile products, a better concept of the fiber properties responsible for textile performance can be passed along to the cotton merchants and breeders. Breeders then will be in a better position to develop cottons with characteristics required for specific uses.

Board of Governors of the Southern Textile Association

# Exchange of Information Essential

## *Joe Delany told members of STA at 43rd Convention*

*Staff Report*

THE EXCHANGE of ideas may mean the success or failure of a mill or of an entire industry, Joe Delany of Joanna told those convening at the 43rd annual meeting of the Southern Textile Association.

The session was held at Myrtle Beach, S. C., June 12-14.

Emphasizing his point, Mr. Delany, who was retiring as president of the association and is now chairman of the board of governors, quoted a statement which showed that European mills are below American production standards because the mills of Europe are very secretive, the mill men do not make visits to other mills, and they permit no visits from other mill men—a contrast to conditions and practices in America.

The retiring president also told of helpful ideas gained in informal discussion of business problems with other mill men during meetings of STA.

**Officers Elected.** Officers of the association for the ensuing year are: Joe L. Delany of Joanna Mills, chairman of the board of governors; D. A. Purcell of Fieldcrest Blanket Mill, president; T. I. Stafford of Clifton Manufacturing Co., 1st vice-president; J. L. James of Erwin at Cooleemee, 2nd vice-president; and James T. McAden, Jr., of Clark Publishing Co., secretary-treasurer.

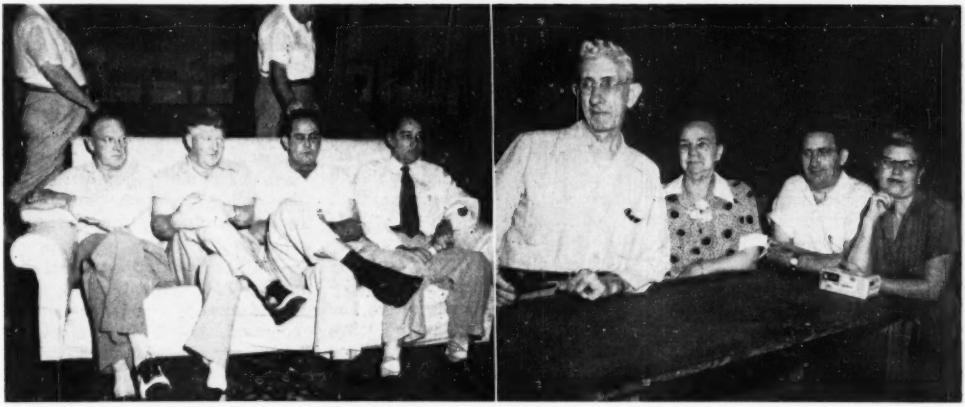
The newly-elected president of the American Cotton Manufacturers Institute, W. A. L. Sibley of Monarch Mills, explained the various activities of ACMI in behalf of the textile industry, and addressed the members on the subject of "the missing element," which is "integrity." Tying in his address with dishonesty in government and its chain reaction effect on this country, Mr. Sibley called for character and integrity in management—as the pattern for subordinates.

"We tend to draw around us people of our type—people of our temperament—of our likes and dislikes—whose moral character is similar to our own. Consequently, if we choose the right type, they in turn will draw around them people who think and act as we do, and in this way we make our plant and industry strong," he said.

On the technical side, Walter Regnery of Joanna explained the results of the interindustry ginning-spinning tests which were recently completed (see June TEXTILE INDUSTRIES), and R. M. Jones of Saco-Lowell discussed the modernization of spinning, with emphasis on the new Gwaltney spinning frame (see April TEXTILE INDUSTRIES).

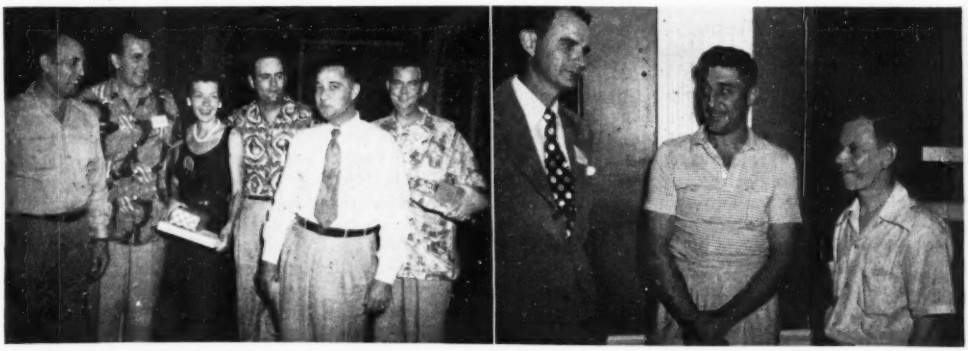
Front row: **Smith Crow** of Erlanger Mills; **James A. Chapman, Jr.,** Riverdale; **T. C. Pegram,** Erwin's No. 1 plant; **Walter Vincent,** Dan River; **D. A. Purcell,** Fieldcrest; **J. B. Powell,** Monarch; **William Pittendreigh,** Riegel Textile at Ware Shoals; **Joseph L. Delany,** Joanna. Back row: **John M. Caughman,** Spartan; **Joseph P. Hughes,** Cone Mills' Eno plant; **J. L. James,** Erwin's plant No. 3; **E. C. Horner,** Enterprise; **H. Cleon Estes,** Pacific; and **J. R. Meikle,** Rosemary.

**Grady Gilbert,** Clinton Foods, Inc., Concord, N. C.; **Mrs. and Mr. Joe Hughes,** Eno Cotton Mills; **B. M. Schachner,** Schachner Leather Belting Co., Charlotte, N. C.; **Mrs. Grady Gilbert;** and **Mrs. J. R. Meikle.**



Left: **W. O. Nickles, W. L. Adcock, Hilliard Brigman,** all of Safie Mfg. Co., Rockingham, N. C.: **W. B. Strickland,** Hubinger Co., Charlotte, N. C. Right: **Mr. and Mrs. Smith Crow** and **Mr. and Mrs. Horace Buchanan,** Erlanger Mills, Inc., Lexington, N. C.

Left: **Frank W. Perry,** Stein, Hall & Co., Inc., Charlotte, N. C.; **I. L. Dowdee,** National Starch Co., Charlotte, N. C.; **Mrs. and Mr. Howard M. Smith,** National Starch Co., Atlanta, Ga.; **W. B. Strickland,** Hubinger Co., Charlotte, N. C.; **W. S. Gilbert,** Stein, Hall & Co., Inc., Charlotte, N. C. Right, **Robert M. McCrary,** Carolinian Mills Inc., High Shoals, N. C.; **William Pittendreigh,** Riegel Textile Corp., Ware Shoals; **Harold J. Ball,** Pequot Mills, Spartanburg, S. C.



# The Case for Chemical Anti-Static Agents

***Need for additional research and test equipment and methods cited as deterrents to rapid solution of static problems with newer synthetic fibers.***

"ONLY BY THE USE of chemical anti-static agents can we look for a real solution to the problem of static control in textiles." That was the opinion expressed by Sidney M. Edelstein, technical director of Dexter Chemical Corporation, when he recently addressed the Rhode Island Section of the American Association of Textile Chemists & Colorists.

Failure to recognize the need for research into static and inadequate test equipment and methods are deterrents to the rapid solution of static problems in the use of materials made from new chemical fibers, he maintained.

To substantiate his claim for chemical anti-static agents, Mr. Edelstein pointed out that neither electrical devices nor humidity can be of much use in controlling static for the consumer—electrical devices can only be used at certain points past which the textile travels; humidity can only be used to control static under certain conditions, and satisfactorily only with the older fibers. On the other hand, he said, a chemical anti-static agent can be put on the fiber and will travel along with the textile to do its work at every point in the process and since it is in the fiber, the consumer will benefit also.

While Mr. Edelstein favored chemical anti-static agents, he readily admitted that many problems arise in connection with their use—where to apply the agent; should it be easily washed off or fast; what about its effect on hand, strength, and appearance of fibers; will it affect the lightfastness of colors, etc.

**How Chemical Anti-Static Agents Work.** Chemical anti-static agents can do their work by any one or all three of these ways, according to Mr. Edelstein: (1) conductance, (2) hygroscopicity, (3) by developing a charge opposite to that formed within the fiber itself when the treated textile is rubbed or comes in contact with another substance. It appears, however, he said, that in order to be really effective, an anti-static agent should make use, at least to some extent, of all three.

Looking into the future, Mr. Edelstein mentioned the possibility of incorporating radioactive elements within the molecule of the anti-static agent itself. "In such a Utopia," he said, "we can see charges being conducted away to the air and to the ground, opposite charges being formed and neutralizing other charges, and at the same time the fiber being constantly bombarded with charged atoms."

**Ideal Anti-Static Agent.** The ideal anti-static agent, in Mr. Edelstein's opinion, must (1) have an enormous amount of anti-static properties bound up in each molecule; (2) work and be effective in small amounts on all fibers; (3) be permanent to washing and dry cleaning; (4) not have any color nor have any effect on the color of the lightfastness of dyestuffs; (5) not change the hand of the fibers.

"Perhaps the ideal will never be reached," he said, "but it shall be approached. . . . Increased anti-static properties are certainly conceivable as we learn more about the mechanism of static generation and removal from textiles and the relationship of these to chemical structure. Today we have some good anti-static agents. Tomorrow we shall have better ones."

**Test Instruments Inadequate.** Concluding his discussion on sources of error in present laboratory instruments for determining the effect of anti-static agents on textiles, Mr. Edelstein said: "In the opinion of our technical staff, and in the opinion of several experts who have investigated the subject, there is no instrument which has been described in the literature, or of which we have knowledge, which can accurately or even reasonably foretell the actual performance properties of a treated textile under plant or consumer conditions from the static viewpoint."

**Choosing an Anti-Static Agent.** Asking the question "How do we choose an anti-static agent for our own particular problem?" Mr. Edelstein answered himself by recommending the following procedure:

First, determine the requirements that the anti-static agent should meet.

Second, based on preliminary laboratory screening tests for such properties as compatability, effect on color, appearance of fabric, etc., or on information supplied by the chemical manufacturer or on both, select that one or those several anti-static agents which seem to best meet your requirements.

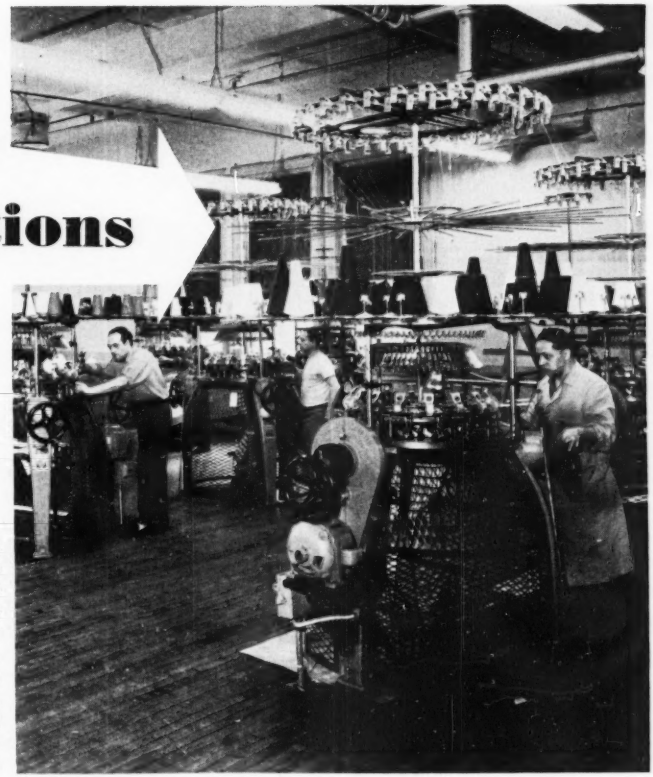
Finally, after selection is made, apply these agents under actual plant conditions and note the practical results.

If the anti-static effects are needed from a manufacturing standpoint, the results will be obvious, Mr. Edelstein stated. Either the problem is eliminated by the anti-static agent or it isn't.

If the problem relates to consumer use, however, the results are less obvious. Until such time as satisfactory laboratory testing instruments for anti-static properties become available, there is no answer, he said, other than to thoroughly test the textile under actual consumer conditions.

*This Knitting Mill's*

# Stop Motions Stop Waste



*Staff Prepared*

KNITTING machine breakdowns and unnecessary downtime cut heavily into production. These culprits have absconded with the profits of many knitting mills. In whatever precinct they operate, there is certain to be a crime wave —yarn waste, smashed machines, excess labor costs, and damaged goods. Fortunately for knitters, there are ways of curbing these crimes.

In the words of Louis Seligman of Mel-Mar Fabrics Corporation: "We have learned long ago that dependable stop motions are our lowest cost insurance against loss and trouble."

35 of the latest type Brinton, Wildman, and Supreme machines in Mr. Seligman's busy Yonkers, N. Y., knitting mill have been equipped with a wide variety of Wesco stop motion devices. Mel-Mar's electric trouble detectors are assuring quantity production of fancies, novelties, and terry knits without any sacrifice of quality.

In knitting fine fabrics on a production basis, there is no substitute for dependable equipment. But, even the most up-to-date knitting machines present no guarantees against yarn failures. These machines must be supplemented with devices which protect against snags, knots, slubs, run-outs, ends-down, bunch-up at needles, and press-offs. In turn, electrically operated stop motions must be protected from power failures, and above all, must be kept in reliable operating condition.

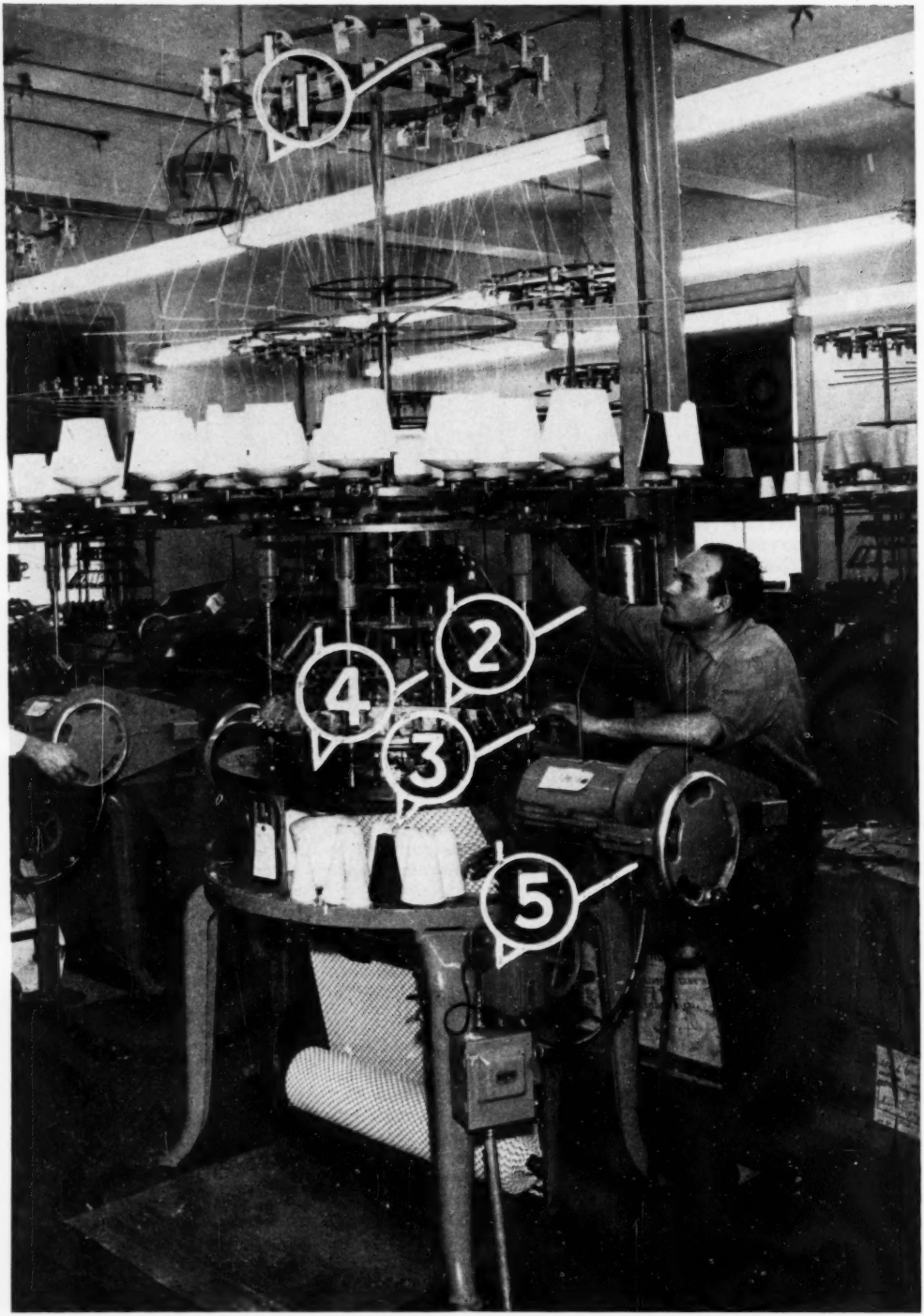
A typical open cylinder machine at Mel-Mar incorporates a stop motion head, a yarn carrier stop motion, a hole and press-off detector, and an electric safety controller. A cylinder and dial ribber includes all of these except a hole and press-off detector, plus a retractable needle protector. The hole and press-off detector is used primarily for jerseys and other flat knit fabrics.

Installation, adjustment, and setting of stop motions are handled by mechanics who are thoroughly acquainted with their construction and operation. A minimum of repairs or replacements is necessary.

Preventive maintenance is also negligible. Stop motions are air blown when the knitting machines are cleaned. This practice removes lint and powder residues from various yarn finishes. A quick bath in solvent removes gummy accumulations. Detaching the unit and replacing it may be accomplished in seconds, due to the simple electrical and mechanical connections required.

A transformer mounted on the machine supplies 12-volt current to the stop motion circuit, a ground return system which makes installation an elementary electrical problem.

***For stop motion details, turn the page*** ⟶


1
2
4
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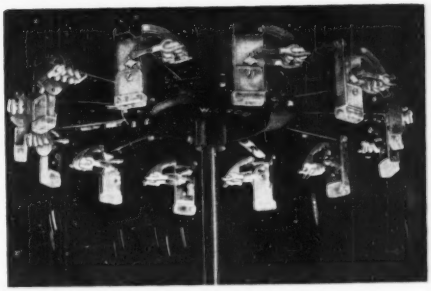
5

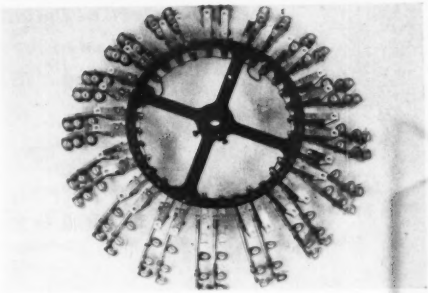
## 1. Head Stop Motion

The top stop motion prevents press-offs and needle smashes by detecting slubs, snags, and knots before they reach knitting elements. One unit is installed for each end of yarn feeding. Some installations are equipped with annunciator lights which locate the actuated stop motion. These units can be adjusted for a wide range of yarn weights and styles by tightening or loosening the spring which changes the amount of pull on the porcelain fingers. Turning counter balance weight in or out adjusts the balance of fly wire. Heavy yarns require correspondingly heavier adjustments. A transparent plastic cover protects the adjusting spring from lint.



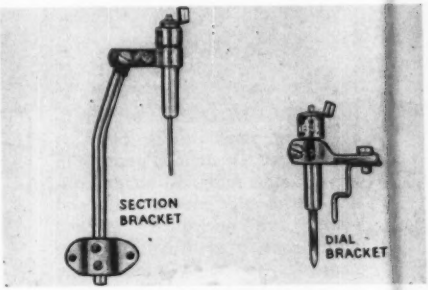
## 2. Yarn Carrier Stop Motion

Ends down and run-outs are sensed by the yarn carrier stop motion. One unit is required for each end of yarn feeding. The only adjustment required for this device is dependent upon the type of yarn. Corrections are made by means of hexagonal screw located on the side of the stop motion. Turning the screw clockwise makes the fly wire spring tighter. This results in faster snap of fly wire when a yarn failure occurs. The wire contacts a metal flange, thereby completing the circuit and causing a relay to stop the machine.



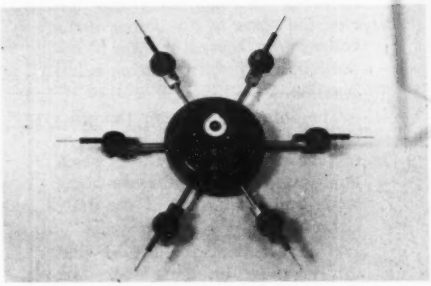
## 3. Needle Protector

The retractable needle protector will stop the machine upon the occurrence of a knot, bunch-up, or slub at the needles of cylinder and dial ribbers, saving hundreds and possibly thousands of needles during the year. Proper pointer setting is located at the point where the dial needle is drawn in at maximum. The operator pushes the top plunger down to automatically snap the pointer back to its original position. A visible plunger shows the operator at a glance which needle protector is knocked off, thereby reducing time consumed in searching for the stoppage. Its retractable feature does away with the necessity of resetting the pointer by hand. Continual fingering of the pointer of non-retractable types results in dislocation of the original setting, thus rendering the device ineffectual.




## 4. Hole and Press-Off Detector

This device is used in open head jersey machines and is constructed with 4, 6, and 8 heads. It stops the machine when the swivel head is deflected in either direction or when the needle pointer touches the cylinder. Placed in position so that the pointers do not strike the sinkers and located as high as possible with reference to the needles, the detector will sense a hole in the fabric or a press-off occasioned by a knot or slub in the carrier guide. Rapid detection of these failures guards against needle, sinker, and cylinder smashes. Individual heads are provided with an adjusting screw held fast by a lock nut. Swivel action is made tight or loose according to requirements by adjusting this screw. Pointer pressure is regulated by moving the hollow tube in or out on its rod and locking in place.



## 5. Electric Safety Controller

Safety controllers stop the machine immediately upon the occurrence of a fuse blowout, a switch being turned off accidentally, a plug being pulled out, or a transformer failure. In short, if current supply to the stop motion fails, the machine will be brought to a halt and cannot be restarted until primary current supply is restored. Heretofore machines oftentimes continued to run although the stop motion plug was kicked loose or pulled out, or if a fuse was blown, or a wall switch inadvertently turned off.

# Pictorial Presentation of Way

***Detailed procedure for roller cleaning as practiced at Columbia Mills is presented. For this mill's method of turning rings and plumbing spindles, see the May, 1952, issue of "Textile Industries."***

**By HORACE L. PRATT and HUBERT R. BLUME**
*Laboratory Director* *Overseer Spinning*
*Columbia Mills of the Mt. Vernon-Woodberry Mills, Inc.*

ROLLER CLEANING or scrubbing steel rollers, as it is often called, is common practice in all spinning mills. Although rollers are usually picked daily and stands are periodically picked with hooks, it eventually becomes necessary to remove the rollers from the stands and give them a thorough cleaning. Dirt and lint clog the flutes in the bosses of the rollers after several months of operation, and proper drafting is impossible.

The interval between thorough cleaning varies with a number of factors such as the grade of stock being run, the yarn numbers being spun, and the extent of the daily cleaning.

It is practical to suggest that this cleaning be done every six months, but under adverse conditions, it may be called for more frequently. On the other hand, an interval of a year may not be too much where conditions are more favorable. It is the condition of the frames, as evidenced by the work they are turning out, which should be the determinant for cleaning rather than a set schedule based on days or months of operation.

**Personnel Required**

1 overhauler

1 man to handle gearing

1 man to clean heads, rings, rails

2 men, one to each side, for taking down and reassembling rollers, cradles, and associated parts. Each man acts as a leader for the group on his side, all personnel being under the overhauler.

2 experienced spinners, one to each side.

4 cleaners, two to each side. These are usually girls and need not be experienced in operation of spinning frames.

The overhauler acts as crew foreman and supervises all the cleaning activity. He should not only understand the work thoroughly, but must be able to get the cooperation of the entire group so that the work will progress rapidly and equally on both sides of the frame. He should be a competent mechanic and should have a sincere interest in seeing that the overhauling is done correctly.

# to Clean Steel Spinning Rolls

### Supplies

This list of supplies and the list of equipment below are suggested for 1929 model, Whitin long draft frames. They will guide the overhauler in making a correct list for the type frames to be cleaned.

Stands
Steel roller joints
Saddles and stirrups
Levers and lever screws
Cradles and cradle pins
Long draft aprons
Replacement gearing
Roving trumpets
Top rollers
Roving skewers
Keys for gears
Replacement bolts and nuts
Lubricants—grease and oil

### Equipment

6- Medium screwdrivers—about 6-in. shafts
1- Large screwdriver—about 12-in. shaft
1- Medium weight machinist hammer
Wrenches: 1- 3/8-in., 1- 7/16-in.; 2- 9/16-in.; 2- 1/2-in.; 1- 7/8-in.
9- Stand hooks with 3/4-in. bill, sharp on end
9- Stand hooks with 1/4-in. bill, blunt on end—about 1/8-in. square
4- Roller scrub brushes*
1- Air motor and hose and 4-in. wire brush
2- Sliver cans to be used as waste containers
2- Water pails
Roller brackets to support steel rolls. There should be one of these notched brackets for every four stands
2- Fiber bristle brushes
2- Old hacksaw blades with teeth ground off, for scraping roll stands
Mild soap powder

*Roller scrub brushes may be made by covering 7 x 2 x 1/2-in. wood blocks with fine card clothing. Pull out about every third row of teeth as well as those teeth where tacks are to be driven to hold clothing to block. A set of these brushes will clean about 50 frames.

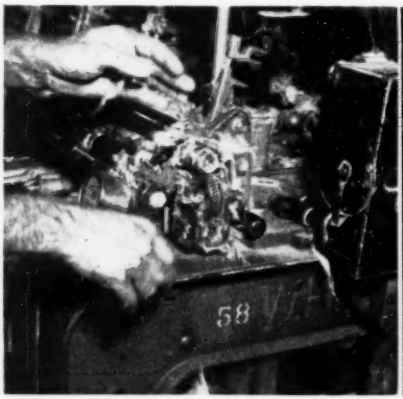
***For roll cleaning technique, turn the page*** ⟶

**Procedure.** With a crew of eleven working, a number of operations will be going on at the same time, one group following up another along the frame. In fact, it is important that the steps in cleaning overlap as much as possible. Also, a second frame is prepared for cleaning while work is going on at the first. Cleaners transfer their efforts from the first frame to the second as soon as possible.

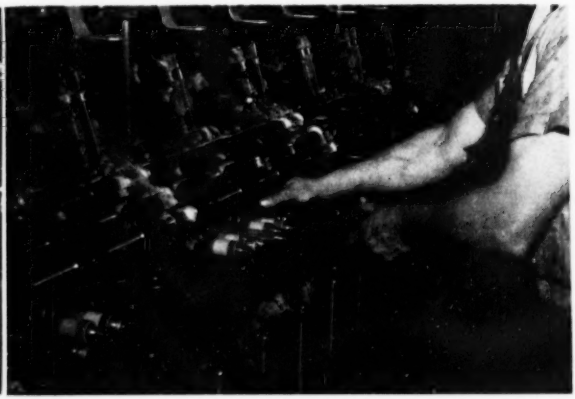
**Preparation.** To prepare the frame for cleaning, excess roving is removed from the top of the creel, and roving in the creel is broken out and placed in roving boxes with the skewers left in the bobbins. The frame is started and the ends run out. Then, the frame is stopped, the yarn is doffed, and is sent to the spoolers or winders. Scavenger rolls and all clearers are removed and put on top of creel.

**(1)** The rolls are unweighted, the top rollers, saddles, stirrups, and weight levers are removed and put in bottom creel. The cradle pins are removed, the knurled rollers are put in the bottom creel, and cradles are hung on roving guide rod.

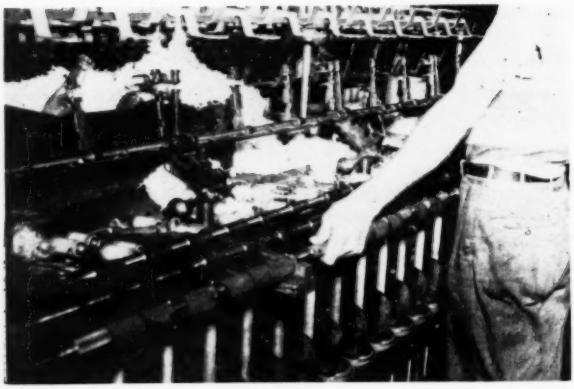
**(2)** The casing is taken from the head of the frame, unless it is a late model with swinging doors, and all detachable gears in the draft gear assembly are removed. Rollers may be removed without removal of these gears, but this is a good opportunity to inspect gears for worn or broken teeth and replace them if necessary.



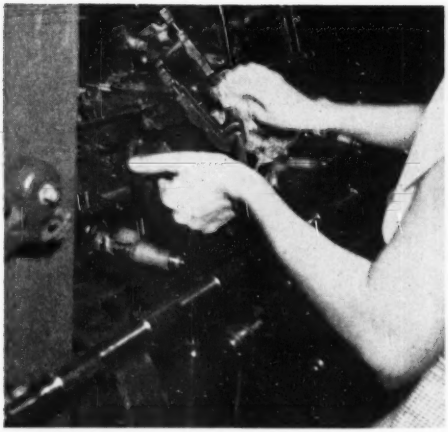

**(3)** Traverse and hank clock are disengaged.



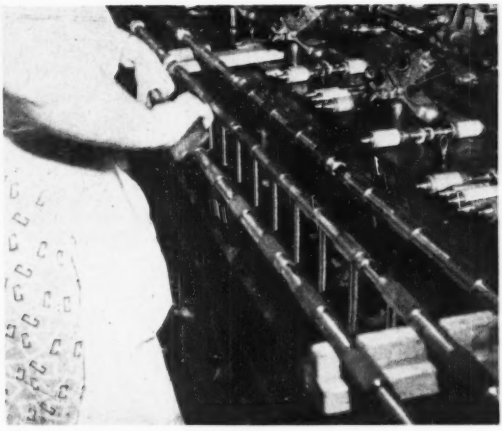
**(4)** Wood brackets are put in position to hold the bottom rolls when they are removed. These brackets have holes through which the weight lever screws of the frame project. A weight lever is inserted in the eye of the lever screw to hold the brackets in place. Brackets must be level when in place so rollers will not fall.



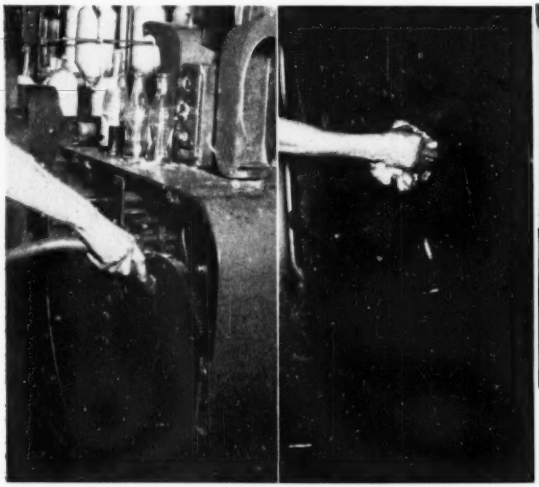
**(5)** Rollers are lifted from the stands and put on brackets. There should be one helper to every six or seven stands and they should spread their arms to distribute the load. All should lift at the same time. The middle roller goes in the front notch on the bracket so the bottom aprons may be easily inspected.



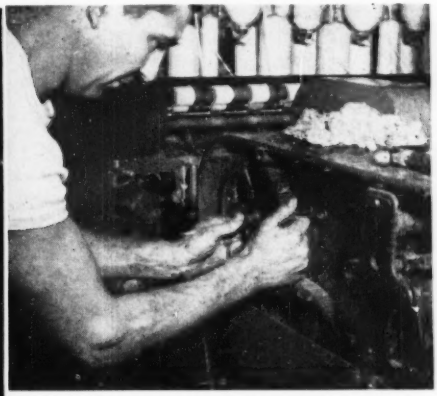
**(6)** Saddles and other parts of the frame which have been removed or exposed are blown off and wiped by hand.



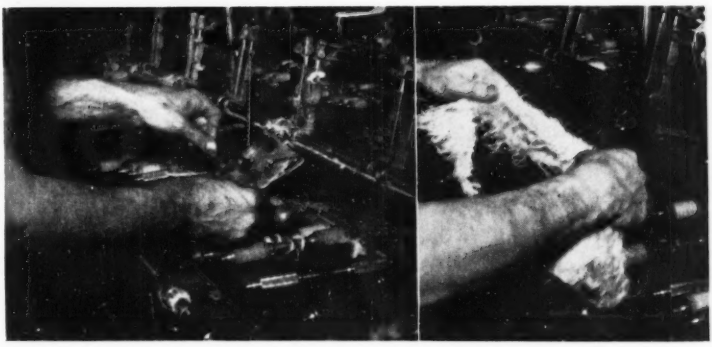
**(7)** Rollers are scrubbed with brushes, the aprons on middle roll being moved back and forth to permit a thorough cleaning. No cleaning fluid is used, for it gums the rollers if not completely removed. While rollers are being scrubbed, overhauler examines all stands, roller necks, joints, and other parts and makes any required replacements.



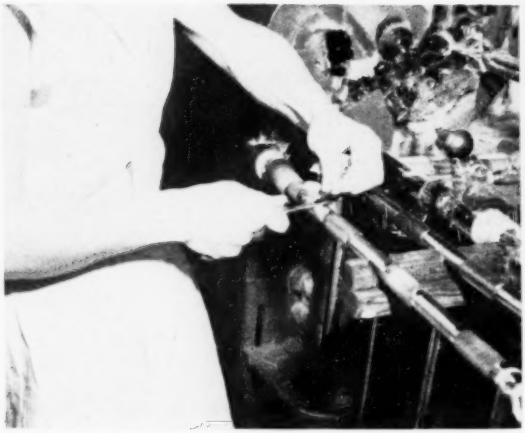
**(8)** Cleaning man wipes and blows out head of frame and thoroughly cleans all gears and oil pipes. He also cleans draft gear assembly.



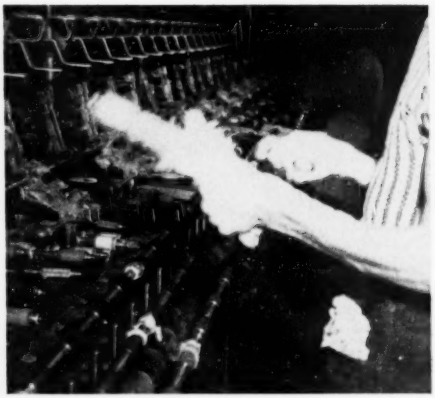
**(9)** Head overhauler now turns his attention to gearing, giving it a careful inspection and making replacements.



**(10)** One man on each side takes old hacksaw blade and scrapes roll stand, after which, stands are wiped with waste.



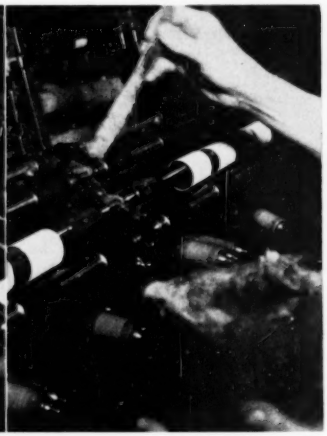
**(11)** One girl on each side inspects top long draft aprons and another girl on each side examines the bottom aprons. Defective aprons are replaced.



**(12)** Meanwhile, all clearers are cleaned, worn felts being replaced on flat clearers and worn revolving clearers being replaced with freshly covered ones. Also, stands are oiled with heavy compound oil.

**(13)** The rolls are now replaced, the same system being used which was used in removing them. Back rolls are replaced first and front rolls last.

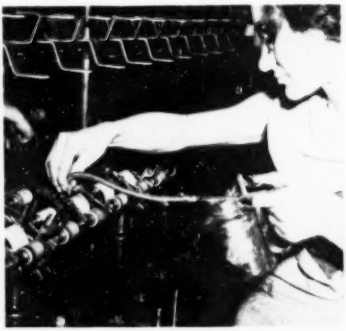
**(14)** One girl on each side replaces cradles while another girl on each side inserts the pins into the proper places provided for them.



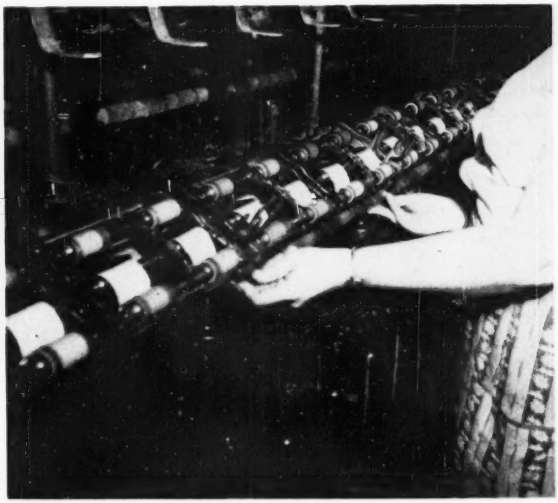
**(15)** A pat of heavy bearing grease is placed on the middle and back bearings of the stands. This grease is allowed to cling to the stand rather than just put on the top of the rolls.

**(16)** Two girls on each side saddle up the frame and hang the weights.

**(17)** One girl on each side oils the saddles and roller tips with heavy compound oil.

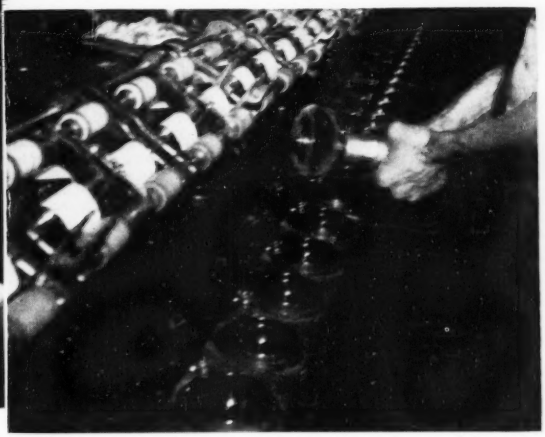


**(18)** As soon as rolls have been replaced, one man reassembles all gearing and oils the head of the frame and the draft gear assemblies.



**(19)** As soon as saddles and roller tips have been oiled, clearers are replaced, bottom clearers and scavenger rolls being put in place first.

**(20)** One girl on each side takes a pail of water, and with a fiber bristle brush and mild soap powder, scrubs the bottom creel board, and the boards of the top flat clearers, while the rails on which the top roving runs are washed with waste. The creels are wiped with dry waste.



**(21)** The cleaning man takes an air motor and a 4-in. wire brush (.005 in. wire bristles) and cleans ring rails and rings. Meanwhile, the under parts of the frame are blown off and the tapes are picked. Another man wipes the top of the creel with damp waste.

The roving is now replaced in the creel, new travelers are put on, empty bobbins are put on spindles, the roving is inserted in the roving trumpets, and the ends are pieced-up. When the frame is started, a check is made by the overhauler, and later, he makes a second check to find hot bearings, if any. If the job is completed near the end of a shift, the section man on the next shift is advised so that he may make this inspection.

When rolls have been removed for cleaning, a good opportunity is presented for alignment of the frames. This should be done about every other time the rolls are cleaned. Instructions for alignment given in the frame manufacturer's handbook should be followed.

# South Carolina Mill Executives

Left to right: **John K. Cauthen,** re-elected executive vice-president; **W. H. Beattie,** Woodside Mills, retiring president; **C. A. Gibson,** F. W. Poe Manufacturing Co., new president; **Marshall C. Stone,** Pacolet Manufacturing Co., vice-president; and **Stanley W. Converse,** Clifton Manufacturing Co., new member of the Board. Also elected to the Board were **Ray Emery,** J. P. Stevens & Co., Inc.; **William H. Grier,** Rock Hill Printing & Finishing Co.; and **E. S. McKissick,** Alice Manufacturing Co.

*Staff Report*

MEETING AT SEA ISLAND, GA., at the Cloister Hotel, on May 29-31, members of the South Carolina Textile Manufacturers Association heard their retiring president, William H. Beattie, of Woodside Mills, report on activities of the past year, and heard the new president, Charles A. Gibson, of F. W. Poe Manufacturing Co., outline plans for the Association for the year ahead.

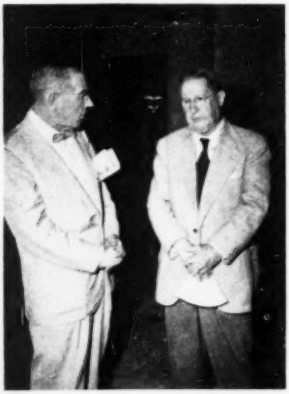
Mr. Beattie's report indicated that the past year was a favorable one for textile manufacturers in South Carolina, despite the textile depression of the past few months. He pointed out that the industry had supplied 80,000 new jobs in the past five years and that South Carolina was now the largest textile state, two out of three industrial jobs being in textiles.

During the past year the Association took an active part, according to the report, in sponsoring the South Carolina "Maid of Cotton" contest; in preparing and presenting pertinent data opposing the efforts made to channel government orders to the so-called depressed textile areas; in arranging for the S. C. Legislature to visit a number of textile mills in the Anderson area; and in presenting information to the Legislature that aided in the passage of constructive legislation.

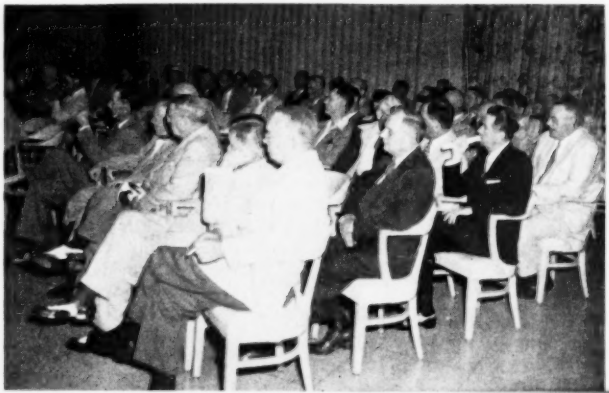
Following the President's report, Ben P. Whitney, Pacific Mills, reported on activities of the Cotton Buyers Division. During the year the Division had protested against new ginning procedures which reduce cotton quality and felt that a study should be made of the effect of dryers, overhead cleaners, and lint cleaners. A motion from the floor requested from the Division specific recommendations on these ginning problems.

Reporting for the Legislative Committee, Howard B. Carlisle, of

**Elliott Springs** and **Fred Symmes,** in the lobby of The Cloister



A part of the audience at the meeting of the S. C. Textile Manufacturers Association meeting at the Cloister Hotel, Sea Island, Ga.



# Meet at Sea Island

**Governor and Mrs. James Byrnes,** of South Carolina, enjoy the floor show after a day at the business session of the Association.

Pacific Mills, stated that the activities of the S. C. Legislature during its recent session were satisfactory from the point of view of the Association. No radical bills affecting the textile industry were introduced, and the legislature had decided to hold the line on the sales tax until more experience was gained as to the educational facility expenses which might be expected in the next few years. The opinion was expressed that South Carolina has had a good government during the year, one which has been fair to industry and generally conservative in approach.

Then, Dr. Norman Vincent Peale, Marble Collegiate Church, New York, gave an inspirational address which was followed by a talk by Floyd W. Jefferson, of Iselin-Jefferson, in which he warned that the nation is being attacked by "creeping socialism."

During the second business session, E. S. McKissick, Alice Manufacturing Co., reported for the Traffic Committee; A. Z. F. Wood, Springs Cotton Mills, for the Insurance Committee; R. G. Emery, J. P. Stevens & Co., Inc., for the Budget Committee; J. B. Harris, Sr., Greenwood Mills, for the Membership Committee; and J. H. Frick, Greenwood Mills, for the Personnel Division.

Principal addresses of this session were given by Robert C. Jackson, American Cotton Manufacturers Institute, Inc.; and W. Rhea Blake, National Cotton Council of America.

Mr. Jackson reviewed the business conditions of the past few months and said that the textile industry was in a better condition today than in some time. Sales seem to be turning upward, and production has leveled off at a sensibly reduced output which will probably maintain prices. He also warned that there is an effort underway in certain groups in labor and government to base wage rate increases on worker productivity. The increased profits resulting from such higher productivity, Mr. Jackson said, should be divided between the customers, the employees, and the stockholders, and it is the job of management to decide how the split should be made.

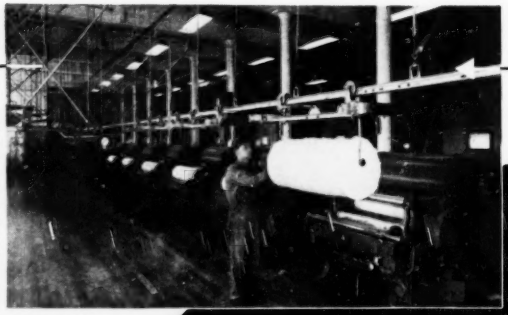
Rhea Blake gave the group information on the Defense Production Act as it influences the textile industry and reported on the progress of the Fulbright Amendments to the Walsh-Healey Act which will guide the administration of the Defense Production Act, if passed. He encouraged those present to write or wire their senators to vote for the passage of the amendments. The Senate was considering these amendments at the time of the meeting.

The new head of the Association gave a short address at the end of the meeting. President Gibson promised that the Association would continue to sponsor the same activities backed by the group during the past years. He also asked the members to recognize the importance of public relations within their plants, their communities, and their states. The industry moved from another area to get here, Gibson said, and it must be a well-liked and appreciated part of the community if it is to stay here.

The Association agreed to meet in Sea Island again next year.

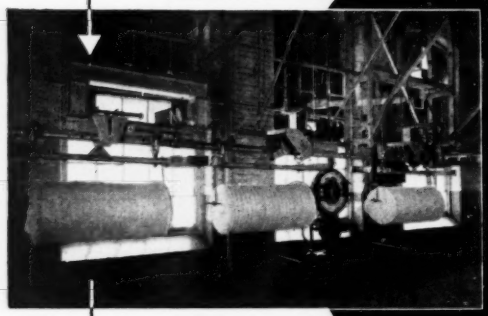
**Floyd W. Jefferson,** of Iselin-Jefferson; **James Chapman, Jr.,** of Riverdale Mills; **H. K. Hallett,** of Kendall Mills; and **Robert Chapman,** of the Inman and Riverdale Mills.

During a recess in the business session: **M. A. Kirkland** and **R. C. Harrington,** U. S. Rubber Co.; **Ira S. Pitts, Jr.,** The Hartsville Cotton Mill; and **William B. Pitts,** Hermitage Cotton Mills.



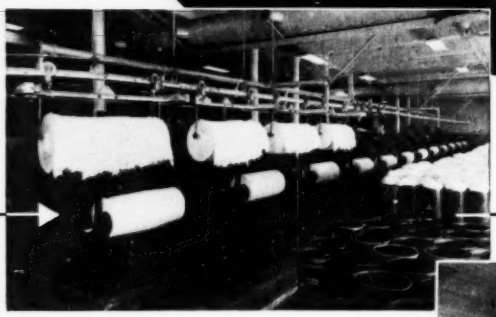
At the scale lap carriers move across scale section when weight is within tolerance and roll to the card room—all automatically. Signal sounds when weight is off tolerance requiring release by picker tender.

Lap Carriers roll by gravity from pickers to scale.

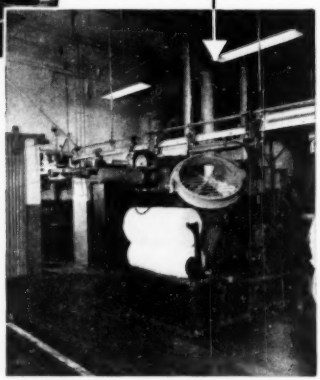


# Overhead Handling *delivers* Laps to Cards *and keeps* Card Room Ceiling Clean

Train of laps move constantly throughout the card room for manual creeling of cards.



Empty carriers return to pickers. Note the high-velocity fan which sends blast of air to ceiling preventing lint accumulation.



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# Making Decorative Non-Woven Fabrics

By A. W. BOESE*
*Minnesota Mining and Manufacturing Co.*

FOR SOME TIME now we have been manufacturing a web which contains approximately 60% "Plas-TECA" (3 denier, 1¼" staple) and 40% viscose rayon (1½ denier, 2" staple). The fibers in proper ratio are weighed out in small batches and blended in an ordinary picker. The blend is carded on a garnett machine consisting of two breaker sections, a cross-lapper, and two finishing sections. The final finishing section has a double doffer arrangement. Webs of various weights can be made by taping the doffers and collecting several plies of carded fiber on a series of cross-aprons.

The final apron, carrying two or more layers of web, feeds the material into a nip roll in contact with an electrically-heated bonding drum. The partially bonded web travels around the drum, and final bonding takes place at a second press roll. The temperature used is from 340 to 375 F. Finally, the material is wound into jumbo rolls for further processing. Speed of operation is about 40 feet per minute.

Produced in this manner, a light weight web of about four pounds per 100 sq yd has a tensile strength of approximately three pounds in the longitudinal direction and one pound in the tranverse.

**Continuous Dyeing.** The major uses for fabrics made by this procedure have been decorative. To make production economically feasible, a continuous dyeing method was necessary. Our first really successful continuous method of dyeing and finishing this material was to run two or three jumbo rolls at a time, with the webs stacked, through a cold, aqueous dye solution containing a mixture of direct dyes, dispersed acetate dyes, and wetting agents. Excess dye liquor was removed by a set of squeeze rolls and the webs were then run through an enclosed flue with an atmosphere of steam and air at 180 F. Following the steaming operation, the material was subjected to two washes, a squeeze to remove as much wash water as possible, and drying by means of hot air.

During these processes, light to

*Extract of paper presented before the American Association of Textile Technologists, May, 1952.

## To Test Abrasion Resistance of Non-Woven Fabrics

A procedure for evaluating the wear resistance of non-woven fabrics was devised in Department of the Army Quartermaster Corps laboratories. As a service to the consumers and producers of non-woven textiles, a complete report of the work involved in the development of the test has been published. (Available from Office of Technical Services, Department of Commerce, Washington 25, D. C. Textile Series Report No. 65 entitled "Laboratory Evaluation of the Wear Resistance of Non-woven Fabrics." Price, $0.50.)

The nature of the breakdown of non-woven fabrics by complex mechanical wear actions is discussed. Flex abrasions and surface abrasion under dry and wet conditions are considered to be critical actions in service wear. Test procedures for measuring resistance to these actions by means of the Stoll-Quartermaster Universal Wear Tester are described and the results obtained on four bonded fiber webs are used to demonstrate the relative precision of the methods and their capacity to predict wear resistance in general.

**Test Procedures.** In testing the resistance to flex abrasion of the four samples, two different folding bars were used —a square-edged bar and a round-edged bar (sketch and details of construction are given in report).

All tests were performed with loads of one pound on the head and four pounds on the folding bar or blade. (These weights have been found suitable for most medium-weight woven and non-woven fabrics. Other loads may be applied in accordance with specific material requirements.)

In the wet test, center portion of specimen was immersed in water at a temperature of 70 F for approximately 10 minutes. The wet specimen was then clamped into the machine and an additional 1 ml. water was placed around the fold of the specimen.

In the surface abrasion test, an air pressure of 4 pounds per square inch was applied to inflate diaphragm and specimen. Emery 0 abrasive paper was used for the dry test and silicone carbide waterproof paper No. 600 for the wet test. In both cases the abradant head was weighted with a one-pound load. Pills of matted fibers were removed from the abrasion area when they caused a marked vibration of the abradant head.

Standard atmospheric conditions were maintained during the tests. For the determination of the three flex abrasion and two surface abrasion characteristics, 10 specimens of each sample were measured.

moderate tension was maintained on the webs, and after drying, the layers were separated to produce individual jumbos again.

**Colored or Metallic Flecks in Fabric.** Fabrics with metallic flecks were made by passing a sheet of light weight aluminum foil into the garnett with the fiber. The garnett broke up and distributed interesting uneven flecks of the foil throughout the web, which, when dyed or left white, gave very interesting effects. Dyed non-woven fabric, when passed through the garnett by the same means, distributed oddly shaped colored flecks throughout the web. Color mixtures and mixtures of color and foil were also made.

**Strength and Sheen Improved.** Soon after we started the pad-steam method of dyeing, it was observed that greater tension applied to the material stretched it in the machine or longitudinal direction and at the same time reduced its width. The result was a material of higher weight and greatly improved strength and sheen. Apparently the network of bonded acetate fibers was stretched in length and reduced in width, allowing the viscose fibers to slip within the network and become better aligned. This improved alignment of the viscose fibers resulted in the increased strength and better sheen.

The fabric we marketed as ribbon made by this process weighed approximately 11 pounds per 100 square yards. Tensile strength was 10-13 pounds per 1" width LW. This type of fabric has very good drape and many other interesting properties. If the fabric is pulled in a tranverse direction it will stretch some 30-35% without fiber separation.

By applying tension longitudinally the fibers assume their previous relationship, and the web does not show any disruption. At the present time we are not manufacturing this type of fabric, but we plan to resume activity in marketing these fabrics again in the near future.

Much of our ribbon material dyed by this method was also made water-resistant by padding with a wax emulsion between the washing and drying stations of the operation. Also some of the display material was made flame-resistant by means of this additional padding station on our dyeing range.

The ribbon and fabric material we are marketing at the present time is made with a relatively light backing of the bonded garnett material, to one side of which parallel continuous filament-yarns of 150 denier cellulose acetate are heat bonded. It has the following physical properties:

1. An average weight of 15 lb/100 yard$^2$ or about 2.4 oz./yard$^2$.
2. Backing constitutes about ¼ of the weight—filaments the balance.
3. Caliper averages 6.5 mils.
4. Tensile strength about 40 lb in longitudinal direction for a 1" sample.
5. Approximately 85 yarns per inch—each yarn 150 denier.

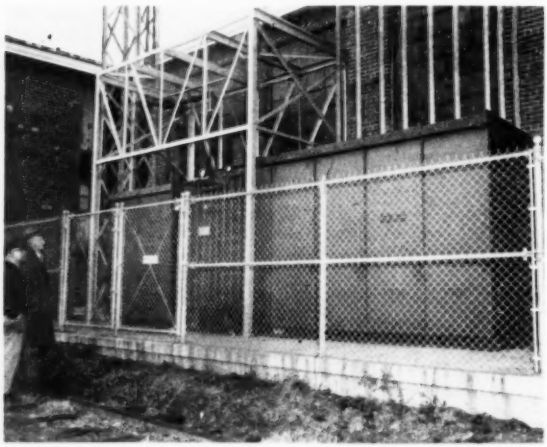
Many additional or different properties can be incorporated into fabrics of this type to meet specific demands and needs.

## *Highland Cotton Mill Has Big Savings After New Substations Installed*

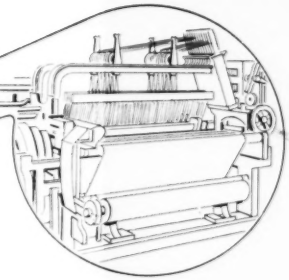
Savings of approximately 25 per cent on motor maintenance and 20 per cent on light bulb replacement have been effected at the Highland Cotton Mill, High Point, N. C., since the installation of five new General Electric load center substations a year ago, according to L. M. Young, mill maintenance man.

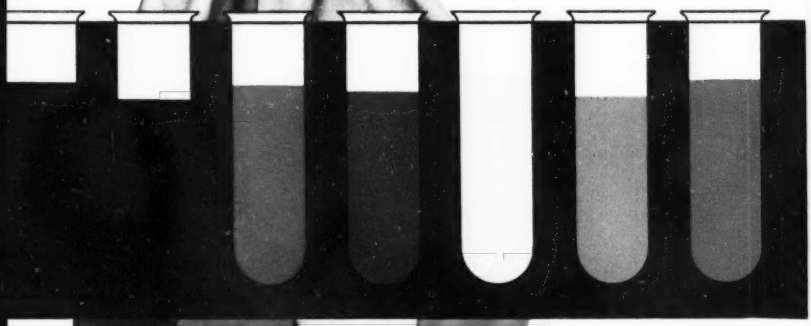
Before the new larger power units were installed, the company had three 750 kva transformers which had progressively become more and more overloaded owing to increases in the mill electrical load. This overload and relatively long cable runs to many of the motors resulted in unduly low voltage at motors, causing them to overheat. Attempts to maintain motor voltage by using higher voltage taps on the transformers caused high voltage during light load periods and resulted in excessive lamp burn-outs.

To correct the situation and to provide additional power for anticipated further increases in mill load, four 1,500-kva and one 750-kva load-center unit substations were installed. The various units were strategically located to obtain minimum length of cable to the load each unit served. The result has been stable voltage and maintenance savings.



custom-designed **COLORS**
for the **acetate** dyer . . .





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# 14 Items of Interest to Wool Carders

*Staff Report*

HAVE YOU A CARD PROBLEM? You may find its solution on these pages, a rapid-reading digest of the Carder's Guild proceedings during the spring meeting of the National Association of Woolen and Worsted Overseers.

### *Cleaning Fly Underneath Cylinders*

Safest, most efficient method is vacuum. Heavy vacuum nozzle hugs floor, avoids damage to clothing. Drawback is the extra tanks that might be called for, especially when a wide variety of stock is running. Alternatives are: blower or rake. Compressed air installation for blower is economical. One disadvantage is air turbulence and possible contamination of different color stock running nearby. Blowers are used to best advantage when same color stock is running throughout card room.

First choice among rakes is one made from a 6" length of fancy wire nailed to pole. Clothing attracts fly like magnet. Fly balls around wire, is completely removed in several sweeps. Some mills use simple wooden rake with weighted head. You can add a swivel to head so rake maintains constant contact with floor. Never use broom. Do not clean while card is in motion.

Carpet mills have more foreign matter in their stock and won't find that practical. Where cleaning is ordinarily frequent and cards can't be stopped due to lost production, it might pay off to construct pits beneath the cylinders—the cards should be able to run for a week or so before pits need to be cleaned. Grids can increase yield on certain types of stock. They also lighten the cleaning load.

### *Standardized Settings and Speeds*

Cards have their idiosyncrasies. Except in unusual circumstances, standardization is impractical. Too much depends on wire condition: age, pitch, bend, length, smoothness, point. Like fingerprints, these variables are never the same from card to card. In the last analysis, the carder must have a "feel" for the work.

It makes dollars and sense to replace clothing as soon as performance indicates. Not only will new clothing reduce variations between cards, it will also keep a card from losing up to 10 or 15 pounds per hour production.

In some instances a good condenser can compensate for additive card defects, make strong slubbing, and therefore allow a certain amount of standardization. . . . . provided all cards are running the same mix.

### *Bearing of Width of Card On Outside Ends*

Cards ranging from 25 to 84 inches have the same problem—roving weights across the card vary with the heaviest ends located in the center. Many reasons are advanced for this phenomena, chief ones being: air currents on outer edges creating draft toward center; and selectivity of various carding elements for certain fibers. Different blends run on the same card often show different roving weight pattern across the width. A newly developed card compensator won't correct the cause, but will neutralize the effect. Tape tensions can also be controlled to compensate for end-to-end weight deviation.

### *Large Doffers vs. Small Doffers*

Greater surface contact of the larger doffer produces more carding "energy" and more carding capacity. A 50" dia. doffer running at same speed as 36" dia. doffer has 25% greater output potential. One mill changed from 36" dia. doffer to 60" dia. doffer, went from 90 to 120 ends with a 35% increase in production. Trend of mills is towards larger doffers since the finisher doffer is a prime factor in computing production. Although the same size as the 60 x 60 cylinder, the 60" dia. doffer appears smaller alongside it due to absence of workers and its axis position 5" beneath that of the cylinder.

### *Bottom Spool Runs Heavy on Carpet Work*

When this condition arises on tapes or rings, and web is equal at the dividing rolls, then the bottom spool draft must be slacker than draft of the top spools.

### *Feed Boxes with Variable Speed Apron Drives*

About 50 are in operation. One mill reports a 50% improvement in scale pan droppings. The vari-speed drive eliminates feed fluctuations due to changes in hopper load.

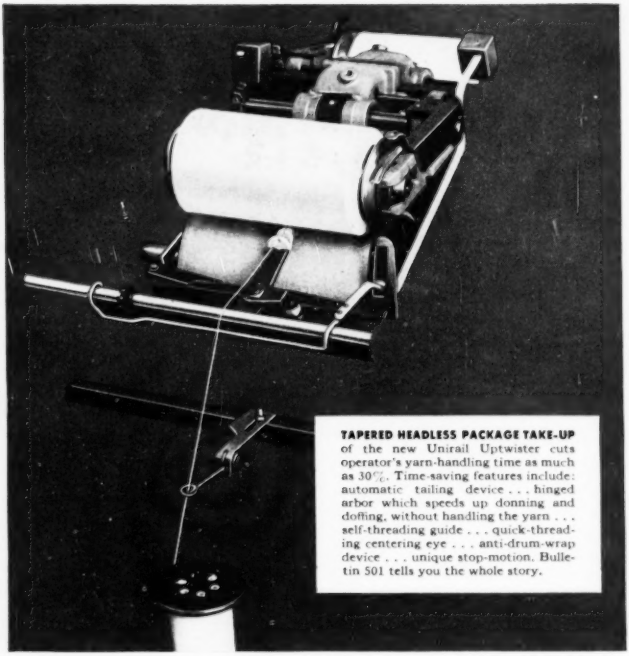
### *Special ZZ Covered Fancy*

Intermittent blank spaces in the wire across fancy, in practice, are remedying a heavying-up in the middle effect common to short stock. This type of clothing cuts down air draft towards the center.

### *Rubber Condenser Tapes*

Tapes are developing good reputation. One mill has been running "rubber" tapes satisfactorily for more

# Reduce Yarn Handling Time 30%



**TAPERED HEADLESS PACKAGE TAKE-UP** of the new Unirail Uptwister cuts operator's yarn-handling time as much as 30%. Time-saving features include: automatic tailing device . . . hinged arbor which speeds up donning and doffing, without handling the yarn . . . self-threading guide . . . quick-threading centering eye . . . anti-drum-wrap device . . . unique stop-motion. Bulletin 501 tells you the whole story.

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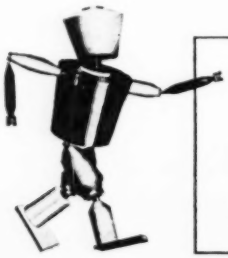
**NEW BULLETIN 501** shows you in detail how the new Unirail Uptwister cuts your costs, speeds up production and improves yarn quality. Write today.

23.2.3



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than a year. This mill felt that synthetic fibers would work into tapes, crusting the surface. It hasn't happened. Another carder reported good results on all fibers, 1 to 5 run. Elasticity appears to be a desirable feature. In wind ups, when tape is grabbed by apron, it won't rupture due to pliability.

Tapes have sharp edges and stay that way with continued operation. They are resistant to lubricants. Red oil won't degrade. Strongest sector of the tape is, actually, the vulcanized splice. A portable vulcanizer makes spot repair work possible in minutes. Dispenses with clippers.

### *Imported Rub Aprons*

One mill is running one imported rubber rub apron in pair with conventional leather apron, resulting in better performance than 2-leather or 2-rubber aprons. Another mill emphatically states that American apron manufacturers better not rest on their laurels. Due to chemical and physical properties of this apron, no grit accumulates and the rubbing texture is optimum. Heating up of these tapes during operation has been noted but without adverse effects. Built-in buttons are trouble-free.

### *Fancy Wire Loose in Foundation*

Quality of the foundation is thought to have changed for the worse since World War II, making this fancy condition recurrent lately. Can be remedied with rubber cement cut with solvent and poured over foundation where it will flow into holes, congeal, and stabilize wire. Do not use shellac, paint, or glue—these products will harden leather, shortening its useful life.

### *Rings Around Tapes*

Rings on tapes are caused by too close a setting between aprons and tapes (less than 36 gauge) that produces rubbing. Rings are common for nylon.

### *Web Defects at Doffer and Comb*

If web folds over, condenser is too far from doffer. When web drops away from comb, set dickey in finisher doffer deep enough to correct. Web support roll solves the problem without causing twits. One mill improvised a brass support roll which discouraged static. Roll is mounted on angle irons whose height is adjustable. Wet stock or stock carding in excessively humid atmosphere tends to sag.

### *Repairing Slack Spot in Ring Wire*

Two schools of thought on this. First advises replacing ring. Second suggests repairing ring while still on doffer. Here's how. Heat linseed oil with added dryer agent and apply to affected area by spray gun after straightening wires. This should hold until entire set is ready for change.

### *Ragged Edges of Peralta Web at Center Draw*

Common trouble at Peralta is the thin center and heavy ragged edges of web going through the center draw. Cure is to slow conveyor down and let stock pile up on Peralta delivery apron. A Peralta doffing device is now available. This piece of equipment replaces the slatted apron, is said to eliminate the static problem. Stock condenses from crush rolls onto 8½" wire-covered doffer roll. Comb feeds web onto intermediate broad band apron, fast and full.

## *Survey of Fiber Preference for Children's Clothing*

A report entitled "Mothers' Opinions of Fibers in Selected Items of Children's Clothing" has been prepared by the U. S. Department of Agriculture's Bureau of Agricultural Economics and is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. (Price, $0.40.)

It presents the findings of the third of a series of studies designed to find out consumers' opinions of fibers used in the manufacture of selected textile products.

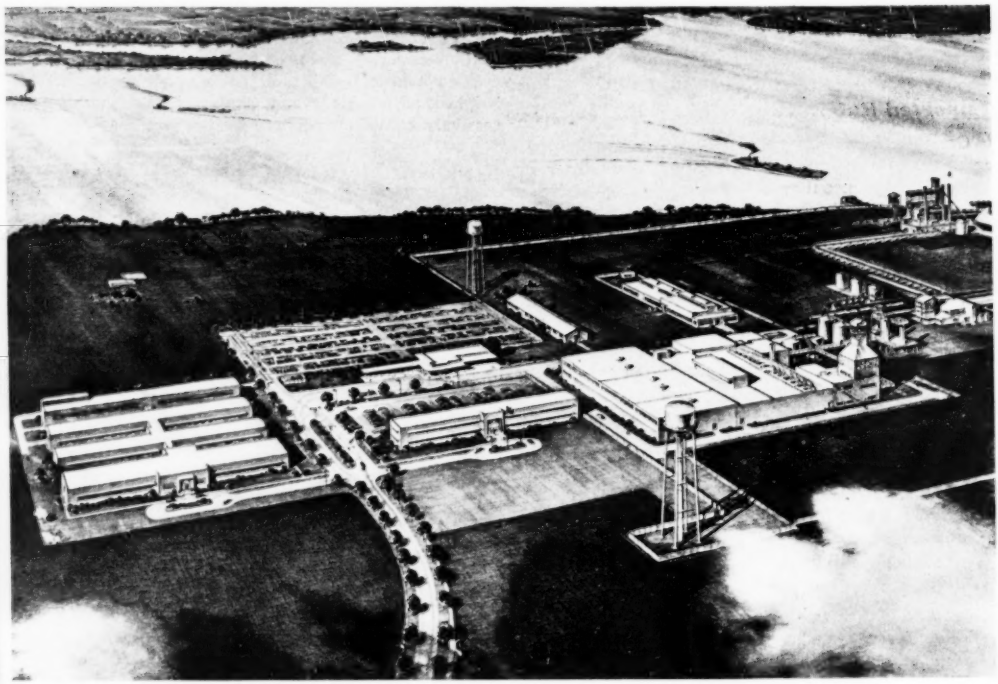
The first study, made in October, 1946, covered 10 articles of women's clothing and 6 household textile items. This was followed by a study of 10 articles of men's clothing in June, 1948.

This third study was primarily an examination of mother's experiences and preferences in regard to fibers in nine items of children's clothing: Infants items—shirts for winter wear, crib blankets for winter use, diapers; girls' items (2 to 12 years of age)—bathrobes for winter wear, one piece dresses for everyday summer wear; boy's items (6-12 years of age) —woven and knitted shirts for school wear, pants for school wear; items for both boys and girls (2-12 years of age)—anklets and socks for everyday summer wear; snowsuits, excluding legging and coat outfits.

Mothers' experience with the fibers, preferences regarding fibers, reasons for these preferences, opinions about non-preferred competing fibers were subjects discussed with the 2,266 mothers by a staff of trained interviewers.

Additional data collected in the survey and incorporated in the report related to garment characteristics mothers say they look for when buying children's anklets and socks, and snowsuits; mothers' experiences with the present system of size labeling used on children's clothing; mothers' attitudes toward labeling on children's garments; the extent to which mothers use feed sacks for making items of children's clothing.

# A Lockwood Greene Project



*This new Chemstrand Corporation plant at Decatur, Ala., has a capacity of 30,000,000 pounds annually of "Acrilan"—the new "warmth without weight" synthetic yarn. Complete design of plant and services as well as field supervision of construction are being provided by Lockwood Greene.*

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| Number of New Plants | over 30 |
| Number of Major Additions | over 25 |
| Reports, Appraisals, Studies and Minor Additions | over 150 |
| Cost of new plants and major additions | over $100,000,000 |

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# A Gauge for Komet Lifters

***Handy tool can be made in mill machine shop.***

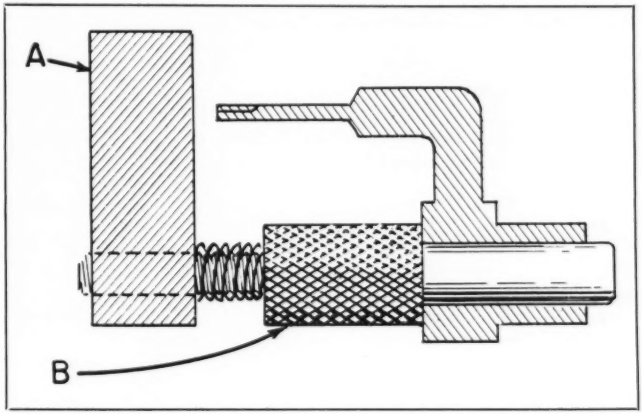
**By ERNEST BRIDGES**

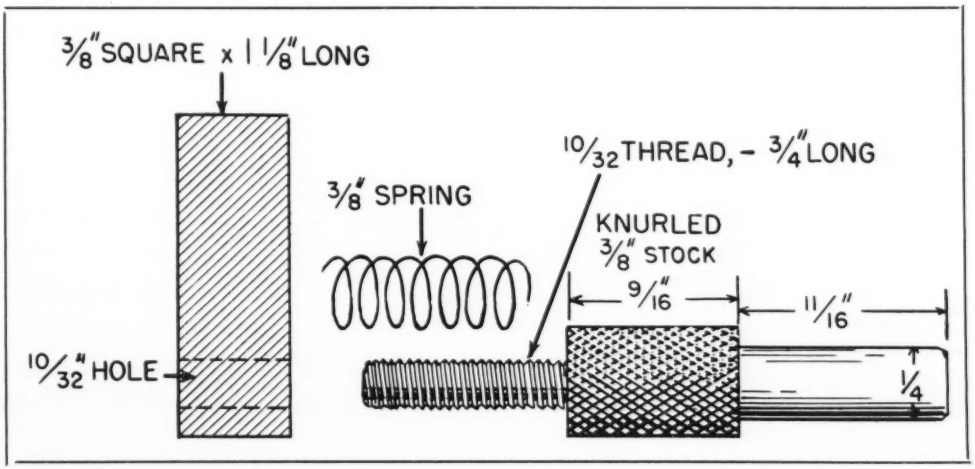
REPLACING a worn or damaged Komet lifter is not a difficult task; however it does require some accurate fitting and adjusting to make a lifter operate properly. Occasionally a new lifter can be placed on the stud, the adjusting screw set for proper height, and the job is done. In most instances, however, some fitting, polishing, or grinding is necessary to get a new lifter to fit correctly. Usually the machine fixer has no way of measuring a new lifter to see if it matches the old one, especially for overall length.

Shown in the accompanying illustrations is a lifter gauge especially designed for measuring and checking overall lengths. The lower sketch shows the three parts which can be made by anyone able to operate a lathe. Simply follow the dimensions given in the illustrations.

The upper drawing shows the lifter gauge with lifter mounted. To check a lifter, place old lifter on stud, hold Part A in one hand, turn knurled stud with the other until front of lifter barely clears the face of Part A, and grind or polish new lifter to fit the setting.

This simple gauge eliminates guess work and saves a lot of time.



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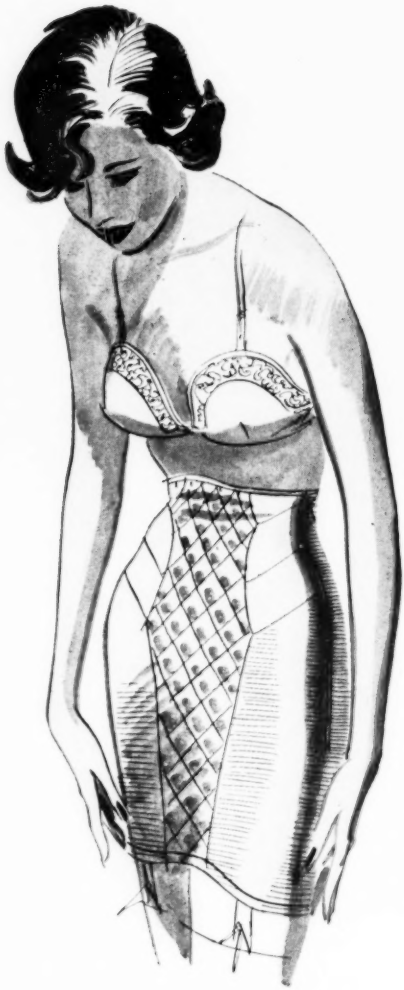
# *Elastic Fabrics*



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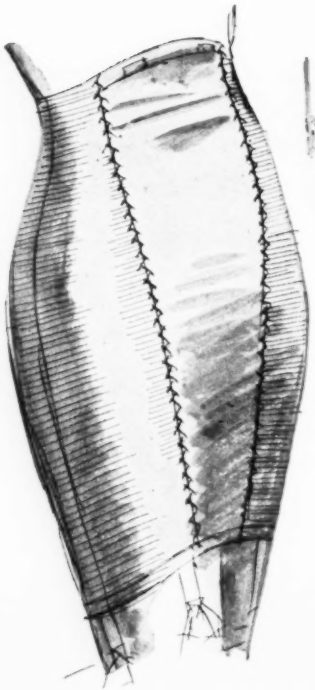

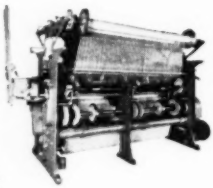

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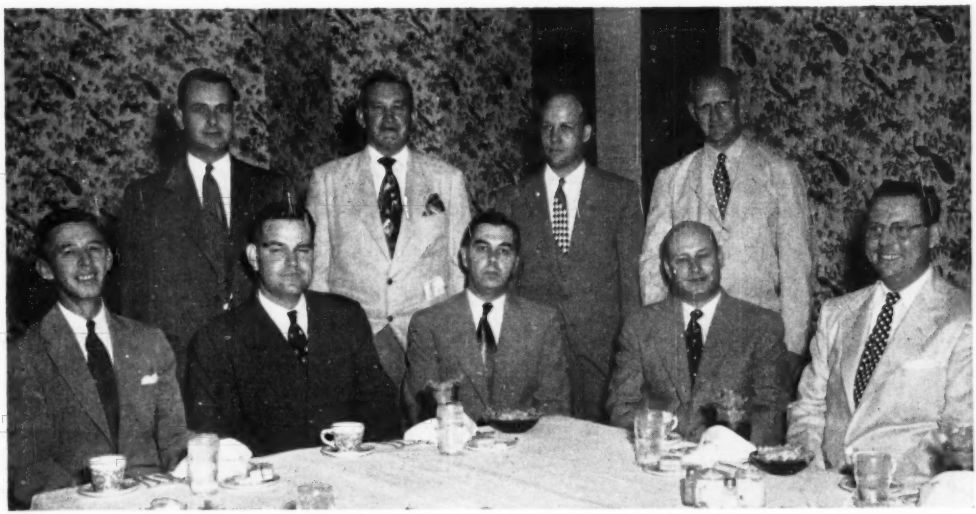

**OFFICERS AND EXECUTIVE COMMITTEE** of the Alabama Textile Operating Executives were guests of Opelika Mills on Friday afternoon when they made a tour of the plant. Shown here at dinner at the Clement Hotel in Opelika on Friday evening are (left to right): seated—**Ben H. Crawford,** Southeastern Engineering Co., secretary and treasurer; **J. W. Patterson,** Tallassee Mills, member of executive committee and past general chairman; **Henry Lanier,** Cowikee Mills, newly elected general chairman; **Homer Roberts,** Anniston Mfg. Co., member of executive committee; and **Cecil A. McAbee,** Huntsville Mfg. Co., member of executive committee. Standing are other members of the executive committee: **Albert Johnson,** Lanett Mill division of West Point Mfg. Co.; **C H. Canady,** Montgomery Cotton Mills; **H. Grady Webb, Jr.,** Langdale Mill division of West Point Mfg. Co.; and **W. E. Williams,** Avondale Mills.

# Alabama Carding-Spinning Meet

*Staff Report*

MORE THAN 300 Alabama Textile Operating Executives met at Alabama Polytechnic Institute's Biggan Hall in Auburn on Saturday morning, May 10, to exchange manufacturing information on certain carding and spinning practices.

Presiding over the meeting was General Chairman J. W. Patterson, superintendent of Tallassee Mills. After the invocation and a welcome from the president of the Institute, Cecil A. McAbee, superintendent of Huntsville Mfg. Co., introduced the guest speaker for the occasion—Thomas L. Carroll of the National Cotton Council.

Theme of Mr. Carroll's talk was accident prevention. "All accidents are dangerous," he said, "whether they produce injuries or not. We must never let accident prevention be thought of as a separate affair . . . safety is an integral part of production."

**Officers Elected.** Henry J. Lanier, general superintendent of Cowikee Mills, Eufaula, Ala., was elevated to general chairman; H. M. Clark, superintendent of Avondale Mills' Pell City plant, vice-general chairman. Ben H. Crawford, Southeastern Engineering Co., West Point, Georgia, was re-elected secretary-treasurer.

New members of the executive committee are: R. L. Alford, superintendent, Alabama Mills, Alicesville, and Oliver Smythe of Pepperell (Ala.) Mfg. Co.,

**Large Sliver Cans.** Eight mills reported experience with large sliver cans on cards. The cost of changing from 12″ x 36″ cans to 14″ x 36″ cans ranged from $43.46 to $95.00 per card (including material and labor). The large cans hold from 38% to 60% more sliver (on the basis of weight) than regular 12″ cans, according to those reporting.

An operating executive commenting on tests now under way in his plant with 14″ x 36″ cans on cards only was asked if coiler head conversion units or new heads were utilized. He stated that conversion units were bought at

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To give you an idea of the magazine's usefulness and great popularity, last year it published 813 articles in 15 different textile classifications. Textile mill executives, supervisors and technicians themselves actually wrote or through direct interviews were responsible for every feature article appearing in the magazine.

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**806 Peachtree Street, N. E., Atlanta 5, Ga.**

W. R. C. SMITH PUBLICATIONS

- ► Experience with Large Sliver Cans
- ► Ways to Put More Sliver in Existing Cans
- ► Effect of High Licker-In Speeds

first; later, several cards were equipped with new coiler heads to accommodate the 14″ cans. No difference has been detected in the performance of the two types.

Another mill experimented with cans measuring 15″ x 36″, 14″ x 42″, and 15″ x 42″. In this instance a 14″ x 36″ can held 40% more sliver than a 12″ x 36″ can. The 15″ x 36″ can held 56% more sliver; the 14″ x 42″, 70% more; and the 15″ x 42″ can held 96% more sliver. Experience was insufficient to warrant conclusions in this mill.

The advantages claimed for large sliver cans were: less piecings, less card doffing, more sliver per can with attendant increase in running time between doffs at both carding and drawing, less creeling at drawing, and lower labor costs. One installation of 139 cards showed a decrease of 7.2% in labor costs.

**More Sliver in Present Cans.** To increase the amount of sliver in present cans, Alabama mills reported the following methods and/or devices as having been employed:

(1) Springs on card calender rolls;

(2) Speed of can table reduced;

(3) "Tongue and groove" calender rolls on cards;

(4) Nylon condensing trumpets in card coiler heads.

Springs on calender rolls permitted one mill to increase the pounds of sliver per can by approximately 33⅓%; cost of the device was said to be $1.00 per card.

Experience with the springs at another mill was reported to be very unsatisfactory—a hard core was formed in the center of the sliver; also grooves were worn in the calender rolls. "We then changed gear on coiler shaft," the mill's report indicated, "turned down end of shaft, changed intermediate gear, slowing down can. This increased card sliver from 11 to 13 pounds. Approximate cost of three gears and turning down shaft, $7.50. We also installed "tongue and groove" rolls on cards at a cost of $12.00 each. This only increased card sliver one-half pound per can. After completing one room, we stopped."

By changing the ratio between the can table and tube gear, at a cost of about $5.00 per card and per delivery of drawing, a colored piece goods mill has added from one to two pounds of sliver to card and drawing cans.

Nylon condensing trumpets for card coiler heads are proving very satisfactory in three of the mills reporting:

**Mill E.** We have just bought a few nylon trumpets for trial. The unit cost is approximately $2.75, with no charge for labor to install them. At this time we think we shall be able to put another pound of sliver in the can, and then it will not be as full as cans made on cards not equipped with the nylon trumpet. We could tell very little difference in variation on the sliver tester.

**Mill G.** We increased the pounds of sliver in the can by 27%; cost per card, $2.15.

Comment from a Georgia mill man attending the meeting indicated that the nylon condensing trumpets have been in use in his mill since last December. 13 pounds of sliver are being placed in 12″ cans. It has been noted that the trumpets are wearing but this is not objectionable due to low unit cost. Life expectancy is about one year, he said. Compression springs on calender rolls are also being utilized in this mill. Little difference has been observed in the results obtained with either of these devices. (For more information or use of nylon trumpets, see page 149, TI for June.)

**"SAFETY IS AN INTEGRAL PART OF PRODUCTION,"** said guest speaker Thomas L. Carroll of the National Cotton Council as he made his "flannelgraph" presentation of "The Big Idea." Without the cooperation of management, he said, the safety engineer cannot conduct an effective accident prevention program.

**High Licker-In Speeds on Cards.** Six mills had experimented with high licker-in speeds on cards. The experimental speeds ranged from 500 to 760 rpm, and the reports indicated that the nep count decreased from 2% to 19.5%; however in one instance neps increased to such an extent that the experiment was discontinued. Only one answer to the question indicated that a decrease in breaking strength was evident upon increasing the licker-in speed. No difference in sliver variation was noted.

Opinions were evenly divided regarding increase or decrease in percentage of waste upon increasing speed of licker-in. Card production remained the same in all instances. One mill stopped an experiment with high licker-in speed because maintenance costs

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Caustic Potash • Potassium Carbonate • Calcium Chloride
Sodium Bicarbonate • Specialty Cleansers • Sodium Nitrite
Para-dichlorobenzene • Ortho-dichlorobenzene • Ammonium Bicarbonate • Ammonium Chloride • Monochlorobenzene

rose excessively. (For a complete report on high licker-in speeds employed in one mill, see the May 1952 issue of TEXTILE INDUSTRIES, page 100.)

**New Type Drawing Rolls.** No extensive tests had been run on new type drawing rolls, according to the four mills sending in written answers to this question prior to the meeting. Highest operating speeds producing satisfactory results ranged from 160 fpm to 200 fpm.

In response to the question "Has anyone eliminated one drawing process by using these rolls and maintained the same standards of quality," one mill wrote "We have made some improvements in our picker laps and card sliver, and the results of the tests made on the new drawing rolls indicate that single process drawing will be possible without affecting the present standard of quality."

Regarding average maximum variation obtained at high speeds, **Mill B** reported 21% on breaker and 24% on finisher drawing as compared with 24% on conventional type breaker drawing and 26% on finisher. On both tests front roll speed was 133 fpm. Speed was increased to 160 fpm and approximately the same results were obtained. Average yard variation at **Mill I** has ranged between 20 and 21% recently, with average maximum in 10 yards of 28%. New metallic roll breaker drawing at **Mill J** averaged 15% at 200 fpm; finisher, 18% (56-grain card sliver, 60-grain drawing).

The fact that mills were not requested to specify the type of drawing rolls on which they were reporting was brought out in the discussion on this question at the meeting. Consequently those mill men who commented from the floor on new drawing were requested to describe their equipment before giving performance data.

Sliver variation on breaker drawing was decreased from 24.2% to 20.95% with the installation of new 4-roll metallic drawing, 6 ends up, according to one mill man's experience. Little difference has been noted in evenness of roving or ends down in spinning, he said. Front roll speed was increased from 138 fpm to 178.

Only one process of drawing is being utilized at another mill where new drawing has been installed. Quality does not suffer, it is claimed. Frames are equipped with two metallic top rolls on back and two cushion rolls on front.

Good results are also being achieved at an osnaburg mill equipped with five-roll drawing, 8 ends up. Top rolls are all metallic.

At this point in the discussion, a mill superintendent asked if anyone had experienced trouble with bearings on new drawing rolls. He is carding 70-grain sliver at his plant and wanted to know if he would have difficulty in processing this heavy sliver on new type drawing rolls. He was informed by another operating executive that he should have no bearing trouble with a 70-grain sliver.

Concluding this discussion, a bag goods mill man reported excellent results with 40 deliveries of five-roll drawing and compression type calender rolls. Pounds of sliver in cans have been increased from 12.75 to 17.50, approximately 37%, permitting a 27% increase in job assignment. Increase in efficiency, 3.6%. Also, there is some reduction in waste due to new creeling schedules.

**Anti-Friction Top Roll Bearings on Roving Frames.** Five out of six mills indicated that variation was not affected noticeably on frames

**C. A. ("CHRIS") CANADY,** superintendent of Montgomery Cotton Mills, lead the discussion on carding.

**THERE WERE FEW VACANT SEATS** in Biggan Hall when the carding and spinning discussion got under way. More than 300 men representing thirty Alabama mills and five out-of-state plants attended.

# Ties 25 Warps in 8 Hours

The Uster Warp Tying Machine is setting new high standards in speed and economy. Mill after mill reports savings in loom down time, in labor, and in better work. We will be glad to show you how you can achieve similar savings.

## how the Pelzer Plant* does it—on "Curity"® Diapers

Operator in the background is preparing a second pattern on an extra frame. It takes less than a minute to transfer the tying head from one frame to another.

Tying the prepared pattern at 250 knots per minute. Note that the machine is almost directly over the loom beam—a valuable feature where space is crowded. Insert . . . Combing the warp before tying.

* The Pelzer Plant of Kendall Mills weaves *"Curity"* diapers. Beams run about 3400 ends of 26's cotton.

This plant reports that standard tying production is 25 warps in 8 hours. They save 15% in loom down time, when compared with their previous method of mechanical portable tying . . . a 24% saving in actual tying time . . . and saves the time of two operators. 24% less time is required for starting up the looms . . . pulling knots through, redrawing ends, etc.

- **Ties the entire warp at one "bite"**
- **Precision Mechanism of unmatched speed**
- **Compact — Convenient — Versatile**

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equipped with either ball bearing or needle bearings on top rolls. One mill claimed less variation in roving and yarn and a 4% increase in breaking strength. All users reported satisfactory service from anti-friction roll bearings on roving frames.

Advantages cited for anti-friction roll bearings were as follows:

(1) Improved running conditions
(2) Less lubricant required
(3) No oil gets onto stock
(4) Less labor required
(5) Rolls turn freely under heavy weights

Question from the floor: "Does anyone have experience with both needle and ball bearing top rolls? If so, is there any difference in performance of the two?" Responding to this question, a superintendent related his experience as follows: Life expectancy of ball bearings in top rolls is approximately four years; repair cost is small—only 24¢ per roll. Needle bearing rolls have been operating in his plant almost four years with no failures to date; they have been lubricated one time—at the end of the third year of operation. No difference has been observed in the drafting of sliver by the two types of rolls.

Criticism of one make of ball bearing top roll was offered by a mill man who said that because of its large diameter it was necessary to use a relatively thin cot, with the result that a cot could be buffed only one time before replacement was required.

**Ring and Traveler Life.** In the accompanying box is a tabulation of information furnished by mills responding to the question "What life are you getting from rings and travelers? Give yarn number, ring size, traveler speed, etc."

During the discussion at the meeting someone asked "Where does wear appear on a ring?" A specific answer was not developed. However, a ring wear test has been planned by one mill—after a predetermined number of hours of use rings will be returned to the manufacturer for analysis. It is believed that some valuable data can be accumulated from such an experiment.

A request for experience with twister travelers made of nylon (TEXTILE INDUSTRIES for April, 1949, page 90) produced no comment.

**Anti-Friction Top Rolls and Spindles.** The advantages claimed for anti-friction top rolls and spindles were as follows:

(1) Less oily yarn
(2) Less lubricant required
(3) Less ends down
(4) Less maintenance required
(5) 12% less power required for spindles
(6) Less spindle vibration

These advantages were enumerated by four mills reporting experience with anti-friction spindles and rolls; however one of these with anti-friction bearings on front rolls revealed that lint accumulates beyond the retainer ring and is difficult to remove, it is more difficult to oil the rolls, and it is difficult to obtain a true surface when buffing the rolls.

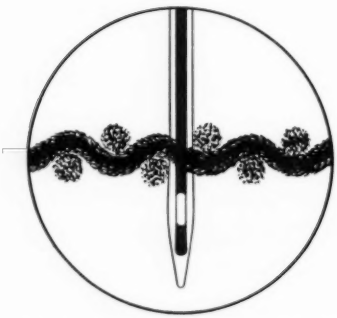
Despite minor objections, the consensus was that anti-friction top rolls and spindles are more economical to maintain and perform better than the equipment replaced.

Substantiating this opinion was a spontaneous report at the meeting which indicated that in 1942 26,000 spinning spindles in one mill were equipped with ball bearing top rolls; to date results have been very satisfactory. It was explained that this report applied to 3" gauge frames; the ball bearing rolls were tried on 4" frames but were found to be unsatisfactory due to the weight adjustment on the rollers.

During the discussion on anti-friction bearing spindles it was brought out that trouble has been experienced on one type of spindle with the doffer guard loading. Paper bobbins are being used by those mills reporting their ex-

**LIFE OF RINGS AND TRAVELERS**

| Mill No. | Yarn No. | Ring Size (in.) | Traveler Speed (ft. per min.) | Life of Rings (years) | Life of Travelers (hours) |
|---|---|---|---|---|---|
| A | 13.5 | 2 1/2 | 5600 | — | 120 |
| | 16 | 2 1/2 | 4100 | — | 120 |
| H | 16 | 2 1/4 | 5242 | 8 | —— |
| B | 14 | 2 3/8 | 5400 | 2 | 96 |
| C | 21 | 2 1/4 | 5000 | 12 | 144 |
| E | 14 W | 2 5/16 | 5200 | 10 | 120 |
| | 14 F | 1 9/16 | 3000 | 8 | 240 |
| D | 14 | 2 3/4 | 5500 | 4 | 96 |
| J | 2.65 | 2 3/4 | 3090 | 4 | 96 |
| | 8.75 | 2 1/2 | 5170 | 4 | 96 |
| | 13.50 | 2 1/4 | 5580 | 4 | 96 |
| | 20.00 | 2 1/4 | 5580 | 4 | 96 |
| I | 13.50 | 2 3/4 | 6000 | 5 | 288 |
| | 2.85 | —— | 6000 | — | 24 |
| G | 13.25 | 2 1/2 | 5440 | 10 | 48 |
| | 17.00 | 2 1/4 | 5150 | 10 | 48 |
| F | —— | —— | 5000 | — | 80 |
| K | 14 | 2 1/4 | 5250 | 5-6 | 144 |
| | 17 | 1 1/2 | 3240 | 15-18 | 288 |
| | 35.5 | 1 3/4 | 4580 | 15 | 432 |



# STOPS YARN CUTTING

For faster sewing and stronger seams — for higher production and lower costs — treat wools, cottons, synthetics and blended fabrics with Velubra-H. This amazing new fiber lubricant reaches *all the way down* to the individual fibers and so softens them that the sewing needle, instead of cutting, tearing and burning its way through the fabric, slides easily between the lubricated fibers. For proof of its efficiency . . .

## Check These 3 Tests

### For Seam Strength

Testing samples were 8.2 oz. cotton twill. One sample was treated with a 5% solution of Velubra-H, the other was untreated. Both were seamed. Then the samples were pulled until the seams split. A seam splitting point of 100 was established for the treated fabric — seams on the untreated fabric split at 79.

### For Fabric Strength

Testing samples were 8.2 oz. cotton twill. One sample was treated with a 5% solution of Velubra-H, the other was untreated. Both were seamed. The seams were then ripped out and the fabric examined at the seams. Warp threads were undamaged in the Velubra-H treated fabric. 13% of the warp threads in the untreated fabric had been cut by the sewing needle.

### For Sew-Ability

Testing samples were 16 oz. 85% wool-15% nylon fabric. One sample was treated with a 5% solution of Velubra-H, the other was untreated. Both samples were sewn in four layers on a 51-500J Union Special Machine. Over forty yards of continuous sewing was possible on the Velubra-H treated fabric without needle clogging, slip-stitches or broken threads. In less than two yards of sewing on the untreated fabric needle clogging, slip-stitches and broken threads occurred.

Velubra-H has other advantages too . . . prevents static build-up in high speed commercial sewing . . . improves cutting characteristics, fabric won't curl . . . increases shelf life, fabrics stay lovely even in storage . . . gives fabrics a delightful soft body and hand . . . aids in sanforizing, improves wetting action in shrinking . . . will not "fight" with other finishes.

Velubra-H will not turn rancid, nor discolor fabrics. Whites stay white, colors are brighter. Samples and technical data sheets are available — write for complete information.

**Velubra-H***

*Velubra-H is a non-ionic polyester of a completely saturated high molecular weight aliphatic acid. It is an easily dispersable light tan cream available in 50-gallon open-head returnable drums.

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**HENRY LANIER,** general superintendent of Cowikee Mills, Eufaula, Ala., conducted the spinning forum



► **Effect of Changing Break Draft on Spinning**

perience with these spindles. It was stated that at least one mill in Alabama is using wooden bobbins on anti-friction bearing spindles.

**Changing Break Draft on Spinning.** The consensus regarding break drafts indicated that no one considered it necessary or advantageous to change the break draft on spinning frames upon altering the roving.

Five mills had experimented with different break drafts. One ran tests on 1.20-2.20 break draft and adopted 1.30 because breaking strength of the yarn was better and there were fewer ends down. Another mill changed from 1.14 to 1.29, but no appreciable change in results was noted. In one instance break draft was changed from 1.26 to 1.35 with no change in results. In another instance, after extensive tests on 12s to 25s yarn, no advantage was noted.

## *USDA Changes Price of Wool Standards Sets*

The U. S. Department of Agriculture has announced the discontinuance of the sale of partial sets of wool standards and an increase in the charge made for full sets of wool and wool top standards.

The increase in charges for the sets of wool and wool top standards is said to be required in order to bring the returns more in line with actual cost to the Department.

The new charges will be $20 each per set of wool standards or of wool top standards, f.o.b. Washington, D. C. A complete set of the official standards for the United States for grades of wool consists of 12 mounted specimens of wool from Grade 80's (Fine) to Grade 36's (Braid). A set of official standards for the United States for grades of wool top consists of 13 mounted specimens of wool top from Grade 80's to Grade 36's. A charge of an additional $4.00 per set of either standards will be made for shipment outside the continental United States.

Charges for demonstrator types (specimens of individual wool top grades) will be increased to $2.00. Charges for 9-pound balls of individual wool top grades will be increased to $40.

## *Full-Fashioned Trends: Finer Gauges, Smaller Mills, Shift South*

The trends to finer guages, to smaller mill units and to a gradual transfer of the center of the industry from the northeastern to southeastern states were all continued and confirmed during 1951, according to the statistical survey published recently by Textile Machine Works and covering the full-fashioned hosiery knitting industry in the United States for the year 1951.

In terms of sections, 60 gauge now represents 16.1% of the total, an increase of 5.1% over 1950, the survey revealed. 51, 54, and 57-gauge equaled 49.5%, an increase of only 1.7%, while coarse gauge equipment decreased to 34.1% of the total. Total number of sections in place was reported to be 290,328 as compared with 294,809 in 1950 — a decrease of 4,481. Number of machines in place decreased to 10,945—519 less than in 1950.

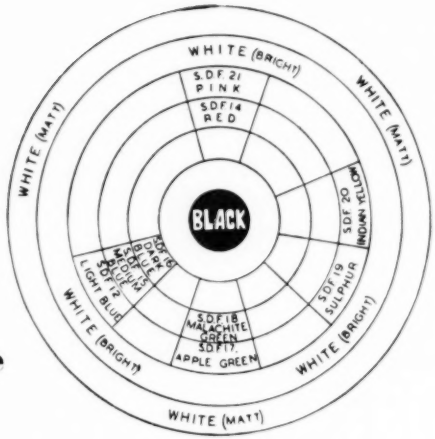
The average number of knitting machines per mill has now decreased to 13.4. In 1942 there were 26 machines per mill; in 1932, 47.4.

Movement of the industry to the South is illustrated by the fact that 47.2% of the full-fashioned knitting machines are in the southern states, 35.3% in Pennsylvania, and 17.5% in the remainder of the country.

Other interesting facts presented in the survey are: average age of machines in U. S., 12.62 years; average sections per machine, 26.53; machines of 48 gauge and coarser are considered obsolete and account for 84.5% of the 895 machines scrapped last year; 996 machines were sold from one mill to another, with 40% of these being exported (Germany was the largest purchaser, followed by the British Isles and Canada); there are 50 more mills than in 1950, a total of 819.

Statistics pertaining to the full-fashioned industry in foreign countries are included.

***Color blending circle useful in selection of spun dyed staples which will produce solid color and effect yarns***




# Tips on Spinning a Spun Dyed Viscose Staple

SUGGESTIONS for the spinning of spun dyed "Fibro"* were presented recently in New York City to members of the American Association of Textile Technologists by Harold Ashton, head of Arrow Mill of Courtaulds, Ltd., Rochdale, England.

An extract of Mr. Ashton's remarks follows:

The first approach to colored work is usually by way of spinning solid colors. In this way spinners, after taking the usual precautions to insure against contamination, precautions which already apply to the wide variety of cross dyeing blends now in production, quickly realize the processing advantages of spun dyed "Fibro."

As the colored pigments are embodied inside the fiber the drafting qualities of the stock remain relatively unimpaired and therefore spin with equal ease and call for little change in the techniques of spinning standard viscose staple yarns. There is, however, a slight reduction in yarn strength as compared with plain materials and a lowering of the yarn count spinning limit. Even so the 40s/50s count range for 1.5 denier 1-7/16" staple, 36s/40s for 4.5 denier 6" staple and 20s/24s skein range for 3 denier 2" staple on cotton, worsted, and woolen spinning systems, respectively, are within reach.

**Blending Possibilities.** In order to assist users of spun dyed "Fibro" in the selection of colors which will produce a fair degree of solidity, a Color Blending Circle showing the standard spun dyed colors has been drawn up and is illustrated in the diagram.

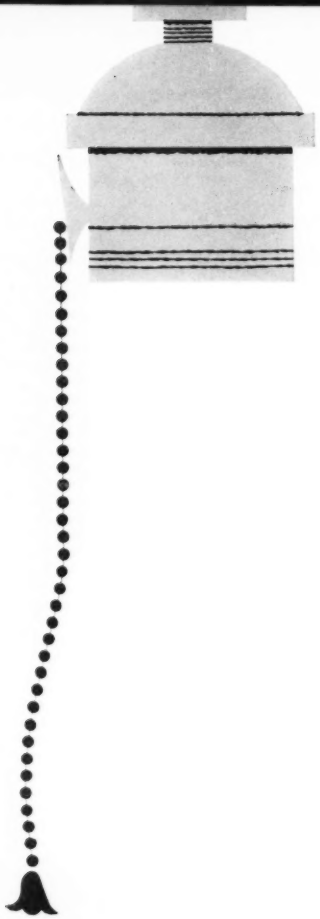
In order to obtain maximum solidity of shade, the best results will be obtained by choosing pairs of standard colors which are placed as near as possible to each other circumferentially, and equidistant from the center of this circle. For example, if a solid color of orange is required, the Indian yellow would be the first color to select. A certain percentage of red must be added and here it is necessary to choose between the red and the pink. Obviously the pink will be chosen in this case as it is the same distance from the center of the circle as the Indian yellow. An excellent range of orange hues can easily be obtained by combining these two colors in various percentages.

If colors placed diametrically opposite to each other in the circle are used, the resultant blend will usually be an unpleasant color, as indeed it would be if these colors were combined in pigment. Such blends may, however, be useful under certain circumstances for special effects. In a similar way, though of comparatively secondary importance, colors situated at considerably different distances from the center of the circle will not readily merge with each other and produce solid colors. Solid effects cannot be expected from blends of the darker colors and white. When light colors are required, white "Fibro" (preferably bright), may be added to colors situated as near as possible to the outside of the circle.

**Special Effects, Heather Mixtures, Etc.** Colored fiber blending is often adopted, not with the object of achieving solidity with colors which merge easily with each other, but rather to produce novel and unusual effects by the exploitation of colors which tend to resist each other and retain their individuality, thereby producing the characteristic mingled effects, heather mixtures, etc.

The Color Blending Circle will be found useful in producing effect yarns, by using the opposite rules from those given for solid colors, i.e., use colors which are fairly widely separated both radi-

*"Fibro" is the registered trade mark of Courtaulds, Limited, for their production of viscose rayon staples. By including colored pigments in the liquid viscose so that when the fiber is made it is colored to the core, spun dyed "Fibro" is produced.



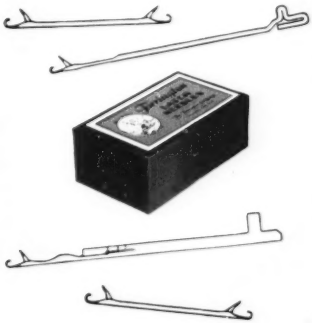
*when a new idea*
*calls for new needles...*
*consult*

# TORRINGTON

Do your plans call for the use of new fibers? And will new patterns and designs . . . or new fabric-types be involved?

If so, your Torrington representative can give you expert assistance on your needle requirements. For over half a century Torrington has served the knitting industry in designing and developing needles to meet new requirements and new opportunities.

***call* TORRINGTON *for quality needles backed by dependable service***



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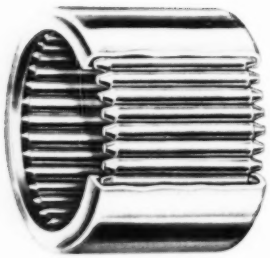
# what's the best buy?



When it comes to selecting an anti-friction bearing, the best buy is the one that best suits your specific application. Many manufacturers have found that for high radial capacity, light weight or compact size, the Torrington Needle Bearing cannot be equalled at any price.

They have found, too, that Needle Bearings provide dollars-and-cents savings in assembly, lubrication and maintenance. All this, plus the initial low cost of Needle Bearings, makes them a really outstanding value.

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ally and circumferentially for maximum contrast effects.

**Color Fastness.** In addition to the advantages deriving from non-interference with spinning properties, which in turn facilitates blending operations, spun dyed "Fibro" offers important economic advantages by providing, in general, a much higher color fastness ratio against relative cost as compared with conventional methods of dyeing. In terms of light and washing fastness as measured by standard tests, spun dyed "Fibro" yields very good results.

It would be too much to expect at this stage of development that all these pigment colors should be fast to everything but, except in relation to cross dyeing of some pigments with vat dyestuffs and the reaction of some pigments to solvents used in some methods of dry cleaning, the range of pigment colors as a whole is very fast. Exhaustive tests are being undertaken to correlate performance of the separate shades against accepted methods of testing, and efforts to improve performance, where necessary, are continuous.

**Over or Cross Dyeing Possibilities.** It should be made clear that spun dyed "Fibro" colored staples being themselves viscose fibers retain their affinity for direct dyestuffs. Care to remember this is necessary whenever cross or over-dyeing is undertaken. On the other hand this affinity for direct dyestuffs makes possible some of the most important results of using spun dyed "Fibro" in blend or together with wool, cellulose acetate, and many others.

The cross dyeing performance of spun dyed "Fibro" against wool colors reveals the many advantages of being able to dye basic cloths to a variety of shades, when color requirements are known.

## Booklet Summarizes Wool Research Activities

The Wool Bureau, Inc., has released the third issue of its annual summary of wool research problems and activities, "Current Research and Development," prepared by Giles E. Hopkins, technical director.

The first edition, issued in 1950 as "Suggested Research and Development Studies for the Woolen and Worsted Industry," (TEXTILE INDUSTRIES for March, 1950, page 108) included 16 major classifications of research designed to be of direct assistance in solving many current manufacturing problems. The latest edition shows that active work is now underway in most of the areas then suggested.

Because comment from the industry reflects considerable interest in the location of all forms of wool research, the 1952 edition amplifies the section devoted to programs on wool throughout the world. In recognition of this change, the new edition has been given the title "Current Research and Development."

Active research on the suggested projects is outlined, and general wool research on additional subjects is mentioned under eleven classifications including genetics, sheep management, preparation for market, chemical and physical structure of wool, fabric scouring, dyeing, mothproofing, cleaning, shrinkproofing, testing methods and standards, and testing instruments.

Research programs in the United States, Australia, England, the Netherlands, Union of South Africa, and Sweden are included, and lists of the major wool laboratories, their addresses and principal officers are provided.

Copies of the publications are being distributed to the wool textile industry and are available upon request to the Bureau at 16 West 46th Street, New York 36, N. Y.

## National Power Show To Be Held In New York December 1 to 6

The Twentieth National Exposition of Power and Mechanical Engineering will be held in Grand Central Palace, New York, December 1 to 6. Again it will be held under the auspices of the American Society of Mechanical Engineers, whose annual meeting will be in session during the same week.

As heretofore, the biennial event will include exhibits representing every kind of equipment used in the generation and distribution of power, with specific applications in many new and more efficient ways. There will be over three hundred different kinds of products on display, occupying three entire floors of the Palace.

Inquiries from prospective exhibitors are said to have indicated sharply accentuated interest in this year's show. The show management reports reservations have actually been filed in sufficient volume to insure booking to capacity long before the opening date.

Management of the Power Show continues under the International Exposition Company, with permanent headquarters in the Palace. Charles F. Roth is manager of the exposition. E. K. Stevens is associate manager.

# 50 years ago this month, Willis H. Carrier founded the air conditioning industry

A printer in Brooklyn was having his troubles. Moisture content of the air was making his paper swell and shrink. But nobody could do anything about that . . . or could they?

Willis Carrier, then a young engineer with Buffalo Forge Company, thought he could. He designed a system that controlled the temperature and relative humidity in that print shop, winter and summer. This was the pioneer air conditioning installation.

Dr. Carrier and his associates formed the company which today leads the industry. And Carrier Corporation has virtually written the history of air conditioning. Carrier created the machines, opened the markets, blazed the trails.

That you are kept comfortable by air conditioning in bus, plane and train . . . restaurant, store and theater . . . office, factory and home . . . is due to the pioneering of this one company.

But Carrier has made even more important *indirect* contributions to your well-being. For air conditioning is also a production tool that is essential to the manufacture of synthetic fabrics, radar and electronic equipment, pharmaceuticals, precision aircraft parts, optical instruments, photographic film and scores of other products.

Air conditioning is an important part of your life today. But tomorrow it will be more important. For this industry of ours is very young. And its field of service is unlimited.

Carrier

AIR CONDITIONING • REFRIGERATION

for 50 years—the people who know air conditioning best

***"Until labor monopolies are broken up and labor unions are subjected to the pressures of competition, there can never be any control of inflation, or anything approximating labor peace."***

# Another Peep Into the Hen House

**By RINGGOLD ARDEN**

MORE AND MORE we see the New Deal chickens coming home to roost, and nowhere is this more unpleasantly noticeable than in the activities of the labor monopolies which the architects of the New Deal regarded as one of the prime movers in their political machine. For years the New Deal, or Fair Deal, or whatever you choose to call this political machine, has been busy fighting monopolies opposed to the machine, and strengthening the monopolies which supported it.

This is a perfectly normal political activity, but it is certainly not good for a country with a national policy of opposition to monopoly control of anything.

The federal government is still hypocritically attacking the A&P and some of the larger manufacturing corporations in the country on the grounds that they are "guilty of monopolistic practices;" while at the same time other government departments are fanatically protecting and entrenching the monopolistic power of the great labor rackets.

The A&P is said to do about five per cent of the nation's grocery business, and is declared a monopoly by one group of bureaucrats. The steel workers' union is said to control 95 per cent of the steel production of the United States, and is declared by another group of bureaucrats to be a benevolent and wholly desirable organization.

It is certain that neither Congress nor the national administration would approve a monopoly of steel manufacturing in the hands of one big corporation. To approve it in the hands of one big labor union takes us right back to the days when our government was subservient to the wishes of the Robber Barons of industry. Today the government seems to be in the hands of representatives of the Robber Barons of labor. As a choice between the two, it might be remembered that the oldtime robber baron at least had financial responsibility, while the modern robber baron is foot-loose and free to wreak as much damage as he chooses, with no possible chance of retribution, since his incursions are protected by law.

The steel workers' union, which maintains an absolute and iron-clad monopoly in the manufacture of steel, has already shut the steel mills down, and is ready and anxious to shut them down again to enforce a wage increase which

## Wool Manufacturers Elect Stevens

Ames Stevens of Ames Worsted Co., Lowell, Mass., was elected president of the National Association of Wool Manufacturers at its 87th annual meeting. Five vice-presidents and 13 directors were also named.

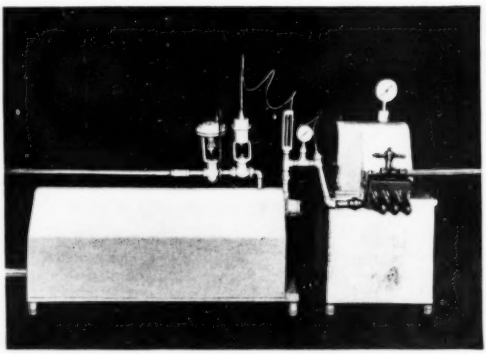
The vice-presidents are Lewis A. Hird, Samuel Hird & Sons, Inc., Garfield, N. J.; Arthur O. Wellman, Nichols & Co., Inc., Boston; James F. Dewey, A. G. Dewey Co., Quechee, Vt.; Ralph K. Hubbard, Packard Mills, Inc., Webster, Mass.; and Francis W. White, American Woolen Co., New York. Walter Humphreys of Boston was renamed secretary-treasurer.

Elected directors for three years were Abbott Stevens, J. P. Stevens & Co., Inc., New York; Herbert E. Payan, The French Worsted Co., Woonsocket, R. I.; Albert J. Gilet, Gilet Carbonizing Co., Inc., Lowell, Mass.; William F. Brandy, Henry Klous & Co., Inc., Lawrence, Mass.

Also, R. C. Atherholt, Hampton Looms of Virginia, Bedford Va.; D. W. Ellis, A. D. Ellis Mills, Inc., Monson, Mass.; R. J. Fontaine, Guerin Mills, Inc., Woonsocket; Rowe B. Metcalf, Metcalf Bros. & Co., Inc., New York.

Also, Minot K. Milliken, Deering, Milliken & Co., Inc., New York; Fulton Rindge, Ware Woolen Co., Ware, Mass.; J. H. Stursberg, Livingston Worsted Mills, Holyoke, Mass.; W. V. E. Terhune (two-year term), Virginia Woolen Co., Winchester, Va., and Elmer L. Ward, Goodall-Sanford, Inc., Sanford, Me.

# Continuous size preparation and increased loom efficiency with the new



# Scott & Williams Hydropulse

**What the Hydropulse is:** like many important developments, this unit is basically quite simple in design. It consists of a heat exchanger for heating cold starch mixes to the swelling point, and a high pressure homogenizer to convert the mixes into finished size of controlled viscosity.

**What it can do for YOU:** the Hydropulse will give you *continuous size preparation.* Costly batch methods have been completely eliminated. You get fresh size at the push of a button.

**In addition to increased weaving efficiency you get:** savings on starch costs, savings on steam costs and better process control. You can be sure of all these benefits because the Hydropulse is specifically designed for textile use by a company that has specialized in textile machinery for over 80 years... Scott & Williams, Inc.

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**SOUTHERN SIZING COMPANY**
EAST POINT, GEORGIA

seems to be based on the same argument that the oldtime robber barons used in support of a price increase. It is a very simple argument—"We can make you pay it."

As nearly as we can gather from newspaper reports, the steel workers' union submitted two very cogent and logical arguments in favor of this wage increase: One of these was that the union believes that the steel companies are robbing the public, and the steel workers should share in the loot; the other is that the steel companies have set aside a billion dollars or more for federal taxes and if they would just give this money to their employees they wouldn't have as much profit and wouldn't have to pay as much taxes.

A number of other arguments in favor of this wage increase have been made, but these seem to be the two important ones.

One more worthwhile argument is the fact that a packed arbitration board has decided, as usual, that the steel workers are entitled to more money. These arbitration boards are a very clever political device, and are guaranteed to get whatever result interested politicians have decided upon.

The arbitration board consists of representatives of the two sides opposed to each other, and also representatives who are supposed to look after the public interest. These so-called public representatives are the only ones that make any difference in the proceedings. The other representatives will stick to their respective sides like glue, and the public representatives therefore comprise the entire arbitration board.

By the simple expedient of seeing that the right kind of people are appointed to this public panel, the decision can be thrown either way. We can not remember ever hearing of one of these so-called "public" panels that seemed to have any interest in representing the public. These groups always seemed to be hand-picked to side with the labor monopolies.

In the steel dispute, a group of men representing the public on such a board could logically be expected to take the position that if the steel companies are swindling the public with exorbitant prices, the public interest would demand lower steel prices, rather than a participation of the labor union in the fruits of the swindle.

It has always been a little difficult for us to understand why any business man would willingly submit a matter involving vast sums of money, and longtime operating policy, to one of these hand-picked boards. It is exactly the same proposition as playing cards with some other fellow's marked deck. You know in advance who is going to win. It is just a question of how much he takes you for.

If one of these arbitration boards in a wage dispute ever came in with the report that the union was already getting too much money and that a wage cut of about 10 per cent would be helpful to the public interest, that would certainly be front page news.

These arbitration boards are never really arbitrating anything. They are, instead, "compromise boards." The labor union, by the simple expedient of asking for twice as much as it could ever hope to get, can count on the hand-picked arbitration board compromising by giving its members a little less of somebody else's money than it had asked for. We can't call to mind a single case where one of these arbitration boards ever did anything for an employer, or permitted him to successfully claim anything at the expense of a union. The arbitration board is solely intended to see how

## Ice Cream 'n Cake For a Party of 8000

Cutting this tremendous five-layer cake is "Miss Rob," wife of the late Benjamin Russell—founder of Russell Manufacturing Co.—and mother of Thomas D. Russell (right), the firm's president.

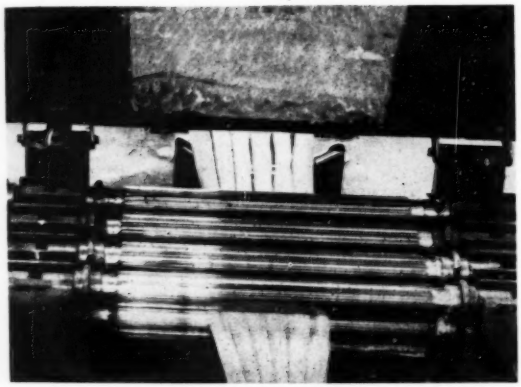
The occasion — a birthday party given by the townspeople of Alexander City, Ala., in celebration of the company's 50th anniversary (TI for June, page 73, "Townspeople Turn Tables").

Decked with 50 gold and glowing candles, the cake weighed 1200 pounds. To go with it was the 2200-pound block of ice cream which can be seen immediately behind Mr. Russell.

More than 8,000 employees and friends came to pay tribute to the Russell organization.

# Ideal High Speed Ball Bearing Drawing Rolls*

## Cost Less to Buy
## Cost Less to Run
## ...and Make Better Yarn



### Cost less to buy

Actual production figures from many mills show that two Ideal Drawing Roll units outproduce three of any other make. In many cases they produce more than four of the old kind. You save money when you replace your worn out drawing heads with Ideals, because you need fewer of them.

### Cost less to run

Because of Ideal's unusual construction the rolls are automatically aligned and synchronized at all times and require practically no attention. Actual production figures show an average reduction of over 58% in up-keep . . . and over 43% saving in power.

### ...and Make Better Yarn

The perfect alignment and synchronization of Ideal Drawing Rolls prevents cutting, mauling, or bruising of fibres and eliminates thick and thin places in the roving. Roving drawn on Ideal units shows 26.9% less variation and 7.4% greater breaking strength. This improved drawing results in fewer ends down on fly and spinning frames.

Ideal High Speed Ball Bearing Drawing Rolls will cut your costs and produce better yarn. Write for full information today.

**Ideal Industries, Inc.**
**Bessemer City, N. C.**

*Patented

## Hosiery Manufacturers Elect Williamson President

W. F. Williamson was elected president of the National Association of Hosiery Manufacturers at the recent organization meeting of its Board of Directors, it was announced by S. F. Rubin, retiring chairman of the board. Mr. Williamson fills the position left vacant by the late Earl Constantine who was the Association's chief executive for 20 years prior to his death last January.

When making the announcement, Mr. Rubin stated that Mr. Williamson's selection was made in keeping with the new emphasis on merchandising and promotion in the Association's activities, and pointed out that Mr. Williamson's background as executive vice-president of the National Coffee Association, which he served the last 23 years, well qualifies him for his new position. Mr. Rubin stated that Mr. Williamson will concentrate his efforts primarily along this new direction of Association work.

Other Association officers elected during this organization meeting were: chairman of the board— Henry A. Lineberger, secretary-treasurer, Knit Products Corp., Belmont, N. C.; vice-chairman — Robert E. Chesebro, president, Hand Knit Hosiery Co., Sheboygan, Wis.; and Assistant Secretary— Matthew C. Kurtz, staff member National Association of Hosiery Manufacturers.

Elected to the board of directors were: R. Mayne Bundy, vice-president, Adams-Millis Corp., High Point, N. C.; W. W. Couch, Jr., vice-president, Durham (N. C.) Hosiery Mills; T. J. Floden, president, Nelson Knitting Co., Rockford, Ill.; John W. Mettler, Jr., president, Interwoven Stocking Co., New Brunswick, N. J.; and W. W. Neal, Jr., president, Marion (N. C.) Hosiery Mills.

J. F. McCrary of McCrary Hosiery Mills, Frank R. Riesenberger of Van Raalte Co., and Reuben C. Ball were re-elected vice-chairman, treasurer, and secretary respectively.

**W. F. Williamson,** new president of the National Association of Hosiery Manufacturers.

much can be had *for* the union.

THE ANSWER to our labor problems is not government meddling, nor confiscation of property to be mismanaged by some government bureau, nor the appointment of stacked investigation boards, nor the appointment of a receiver to ruin a business during a labor dispute, nor any of the other silly remedies so glibly proposed in and out of Congress.

The answer to the problem is in breaking up the labor monopolies and making them amenable to the general laws just the same as the corporate monopolies had to be broken up and made amenable to law years ago. Until these monopolies are broken up and labor unions are subjected to the pressures of competition, there can never be any control of inflation, or anything approximating labor peace.

Industry-wide bargaining on the part of labor unions is industry-wide price fixing, and is just as vicious and just as contrary to the public welfare as industry-wide price fixing on the part of corporations. There is no difference whatever except that the labor unions have been supporting a political regime which has become indebted to them, while the corporations have opposed this regime.

As far as the public is concerned, an increase in the price of steel to benefit six hundred thousand workmen is exactly the same thing as an increase in the price of steel to benefit six hundred thousand stockholders. To say that the workmen need the money worse than the stockholders is purely a matter of opinion, and has nothing to do with the fundamental issue at stake.

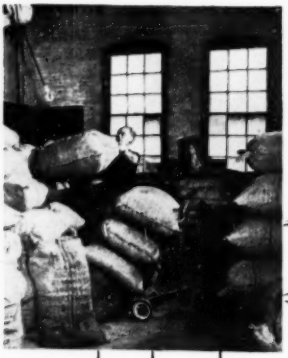
You can not bargain with a monopoly. You can only capitulate to it or fight it. The term collective bargaining is one dear to the labor racketeers, because a collective bargaining system cements their power over great groups of dues payers. The labor racketeer, however, fully realizes that what he calls collective bargaining is not bargaining in any sense of the word at all. What he visualizes is collective submission of the employees to his management of their affairs, and collective submission of their employers to his demands.

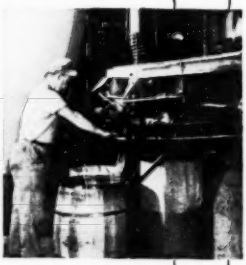
By labor union definition, collective bargaining is a one-way street, to be occupied by the employees only. The employer is never supposed to demand anything of the union, but the union is supposed to constantly demand more and more of the employers. This is not bargaining, but extortion.

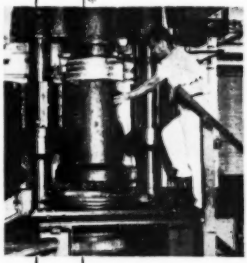
There is no such thing as a "fair price" and no such thing as a "fair wage," which is nothing but a price for a man's services. There is only what a person wanting to buy something is willing to pay for it. This price seldom seems fair to the seller, and what the seller asks seldom seems fair to the buyer. Only perfectly free competition to buy and sell as people please can establish prices which are reasonably fair.

When the seller has absolute and irremediable control over the entire supply of anything, his idea of what is fair expands rapidly. Only open competition in a free market can develop a fair price, and what is a fair price today, may

Custom Made TO FIT YOUR NEEDS







# Water Soluble Gums

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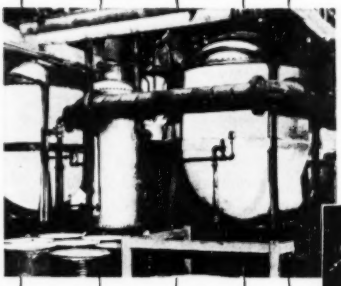
Whatever your requirements are for gums . . . solution, whole, granulated or powdered . . . Jacques Wolf & Co. can meet your needs. We have over 40 years' experience in direct importation, processing and supplying the textile and allied industries.

Along with Tragacanth, Arabic, and Karaya we can also supply Irish Moss, Locust Bean and Gum Shiraz in any form. If desired we can furnish these gums from our ample stocks, undiluted, unblended and in original packages.

We would welcome the opportunity of submitting samples to meet your requirements.



JACQUES WOLF & CO. 50th ANNIVERSARY 1902-1952
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not be a fair price tomorrow, but if it is all you can get, you have to be satisfied with it. The textile industry has learned this lesson several times.

These great labor monopolies must not only be broken up in the public interest, but collusive action by the labor unions must be penalized just the same as collusive action by the corporations would be punished. A labor union representing the employees of one company should no more be permitted to act collusively with representatives of the employees of another company to extort money from the public than the managements of those companies should be permitted to do the same thing. Extortion practiced by any group of persons is still extortion.

Running a labor union is a business just like running an insurance company or a steel mill or a textile plant. It is not only a business, but it is "Big Business," involving billions of dollars every year. It is a business, the income of which is determined by dues, and in the fight for those dues, the business men who run the labor unions act just like any other business men.

That labor unions are businesses rather than humanitarian movements is evidenced by the bitter rivalry between these different rackets for getting their share of the gravy. If there was anything of a humanitarian nature, aimed at the uplift of the working man, involved in these activities, the different rackets wouldn't be constantly fighting for the dues in various plants and industries.

Who ever heard of a labor leader who said to another labor leader, "I am not interested in the ten thousand dollars a month you get out of this plant, and since you have the employees organized and enjoying the blessings of unionism, I would not think of interfering with your racket."

The papers have recently carried an account of the defection of one of the big shots in a large union. An intra-racket squabble had resulted in this man losing some of the power and prestige in his union (or company), so he does just like any other employee of a big company who is dissatisfied with his job—he switches over to a competing company, which he believes offers him better opportunities for his talents.

Until our Congress fully recognizes the fact that Big Labor is Big Business, now engaged in the practice of monopoly, and proceeds to break up the monopoly and subject the labor unions to the operations of the common law, we are going to see our labor troubles multiply, and will sooner or later see a labor dictatorship established in this country.

You can not let people accumulate more and more power without being sure that they will ultimately use it to their advantage.

## Georgia High School Graduates Eligible For Textile Scholarships

Three four-year scholarships, each in the amount of $1,000 per school year, to the Georgia Institute of Technology will be awarded Georgia high school graduates this year, according to a recent announcement by L. R. Brumby, president of The Textile Education Foundation, Inc.

These scholarships, which will be awarded for the first time, were established by the Foundation to "encourage and assist worthy young men who seek to obtain an education in textile engineering to prepare themselves to assume positions of leadership in this industry," Mr. Brumby said.

The Textile Education Foundation was established by Georgia textile mills in 1942 to aid in the advancement of textile education in the South, and particularly at Georgia Tech. The new scholarship plan was drafted by a Foundation subcommittee headed by George H. Hightower, vice-president of the Thomaston (Ga.) Mills.

The financial need of applicants will be one of the bases upon which the scholarships will be awarded, but controlling factors also will include qualities of leadership, scholastic standing, potential value to the textile industry, and executive qualifications.

The primary purpose of the scholastic plan, said Mr. Brumby, who is vice-president of the Bibb Manufacturing Co., Macon, is to locate, train, and develop, through technical education, potential executives and supervisors for the future management and operation of textile manufacturing plants, in this state.

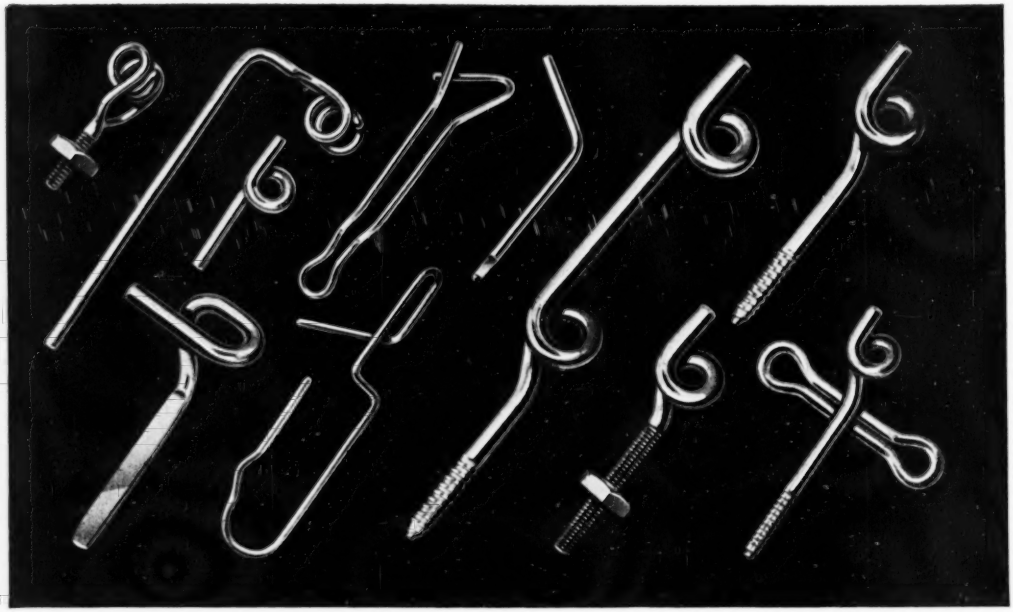
Applicants must be citizens of the United States and residents of Georgia. They must have graduated satisfactorily from an accredited high school. Awards will be made only to qualified students who are entering their first year of educational instruction in the A. French Textile School at Georgia Tech during or subsequent to the fall quarter of this year.

Applicants must enroll in a course of instruction leading toward either a degree of Bachelor of Science in Textiles or Bachelor of Textile Engineering.

Foundation officials said preference in the awards would be given students planning to enroll under the Co-operative Plan at Tech, but awards will not be limited to these students. The Foundation will also assist the scholarship winners in obtaining a job in a textile mill, as a part of the Co-operative Plan.

In as much as a maximum of three scholarships will be awarded annually and each scholarship will be for four years, there will be 12 scholarship winners studying at Georgia Tech by the fourth year of this program, and the Textile Education Foundation will be providing a total of $12,000 a year then to pay for their training.

Qualified students may obtain applications for the scholarship from their high school principals, and all applications should be mailed or delivered to the Director, A. French Textile School, Harrison Hightower Building, Georgia Institute of Technology, Atlanta, Ga.



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THERE'S A DIFFERENCE! The chromium plating on Mitchell-Bissell Thread Guides is denser and longer-wearing than on other wire guides on the market. A thick application of hard chromium, polished to a mirror finish, makes these the highest grade wire guides obtainable.

*Guides Are Illustrated Approximately Actual Size*

MITCHELL-BISSELL CO.

*Guides Can Be Made in Any Desired Shape or Size*

**TRENTON, N. J.**

*Southern Representative: R. E. L. Holt, Jr. & Associates, Jefferson Bldg., Greensboro, N. C.*

# Technologists Ask About X-51

***Panel of experts answers questions about American Cyanamid's recently announced X-51 acrylic fiber.***

*Staff Report*

WHAT ARE the special interests of textile technologists in a new fiber when it is just being introduced to the trade? Even though the fiber may still be in an elementary pupal stage, these technologists are eager to know in advance what will be its properties upon hatching.

It's their special concern because the organizations they represent might have to make precedent-breaking decisions on the day that such fibers become available in quantity. Their competitors will too.

The March meeting of the American Association of Textile Technologists shed some light on this question of special interests. Then, several papers relating the facts about American Cyanamid Company's X-51 acrylic fiber were presented for the first time [see TEXTILE INDUSTRIES for April, page 112]. The information made public was voluminous in detail, yet not sufficiently illuminating so as to satisfy the avid curiosity of all the attending technologists.

This report of a discussion period, in which a panel of experts answered questions posed from the floor, might give some insight into the workings of the inner-minds of the industry's inquisitive technologists.

***Q. What is meant by the "hazy appearance" of X-51 acrylic fiber?***

A. This description has reference to the self-delustering property present in the staple in considerably greater degree than in the filament. It is purely physical, resulting from the fine light scattering structure of the fiber.

***Q. What are the considerations for preboarding or boarding of men's hosiery?***

A. There is no necessity for preboarding. The stocking can be set after dyeing by a boarding operation at a temperature of 250 F for a period of seven minutes.

***Q. How can X-51 acrylic fiber be differentiated from other acrylic fibers in the yarn or fabric form?***

A. X-51 acrylic fiber is the only one with a circular cross-section. It also has a well-defined ring structure in the cross-section. There is a prominent and evident "skin" in filament.

***Q. Describe anti-static agents applied for spinning.***

A. Staple and filament have sufficient anti-static agent applied during manufacture to avoid trouble in processing. If wet processed, an anti-static agent should be reapplied.

***Q. What finishing agents are applied after dyeing and is there any modification of the fabric resulting?***

A. Usual fabric softeners do a good job. They stand normal amount of dry cleaning and fair amount of laundering.

***Q. What can be stated at this time about processing on the worsted system?***

A. The greatest potential lies in the cotton spinning systems, and that has been where the initial experimentation has occurred. Only a limited amount has been processed in the worsted system. Pin Drafter tests indicate that no changes in settings or speeds are required.

***Q. Can you describe emulsion applications for X-51 on the woolen system?***

A. 100% X-51 doesn't require emulsion prior to carding. We have had no experience with blends containing wool. We would anticipate some difficulties which can only be ascertained when experience in that field has been attained.

***Q. Describe considerations of blending with acetate.***

A. Both fibers will dye by acetate process, but acetate will take the bulk of dyestuff. The union is not good. The shade is not uniform.

***Q. How about dyeing in presence of viscose?***

A. Can be dyed by cuprous ion method.

***Q. Tell something about pilling characteristics.***

A. There has been no evidence of pilling in blankets, slacks, or

(*Continued on page 172*)

# Always Uniform

Precision is never an accident. Unvarying quality must be put there by the maker . . . whether it's in Victor Mill Starch, bolts or screws.

Mill men know that Victor's uniformity shows up in better penetration, stronger warps, greater smoothness, fewer slashing problems.

That's why both Victor and the Keever man are known as "The Weaver's Friend."

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*Corn, wheat and other grain products for industry since 1898*

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Shorts Cuts • Comments from Readers •

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

# Reader Suggests Ways to Establish Job Assignments

EDITOR TEXTILE INDUSTRIES:

One of the most difficult tasks confronting overseers in present day mills is setting up proper job assignments. This is particularly true in mills that are unionized, where the overseer will be watched closely to make sure that he does not overwork any employee or assign any operative duties which are not considered part of the normal routine.

Back in the "old days," an employee, although he usually had a regularly assigned job, might have been asked by the overseer to do other necessary work, and the operative usually did the job without question. The operative was employed to work in the mill for a definite number of hours each day and the job assignment was of little importance.

Although there were definite job assignments, in many instances, the assignments were on a haphazard basis, resulting in many inequalities. Spare help was usually plentiful, and any slack resulting from improper work loads could be taken care of easily.

The eight-hour day and two- and three-shift operation of textile mills have brought several changes. It is no longer profitable to maintain a reserve of spare operatives. Now it is necessary for each employee to have an adequate job assignment, but in a business as complex as textile mill operation, this is easier said than done.

In a mill manufacturing only a few styles of cloth and on a fairly steady run, determining of job loads is not so difficult. But in a plant producing a wide range of constructions, which may change constantly, the assignment of proper work loads may be complicated.

Even in mills having a standards department charged with the responsibility of setting up work loads, the overseer still has a big part to play, for it is up to the overseer to get the job done. For his own protection, the overseer should understand every step in establishing the job loads and should make final decisions.

If the mill does not have a standards department the overseer should, with the help of the secondhands, make a periodical study of each job in his department. Perhaps this should be done each year. One job should be examined at a time. Every duty that the operative has to perform should be listed in detail and reviewed within a few days. Some duty or duties may have been unintentionally omitted.

If the job is the same on all shifts, special care should be taken to be sure that all the procedures are carried out in the same way on each shift; otherwise friction may develop between shifts. Grievances may be brought up if adequate cautions are not taken

**KINK CONTEST!**

**15 minutes of your time may be worth $100**

**This contest ends July 15, 1952.**

*EVERY kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are received.*

**The contest rules are simple:**

*All contributions must be postmarked not later than midnight, July 15, 1952.*

*A photo or rough sketch will make your entry more valuable, but if you don't have either, send us you kink anyway.*

**Send your contest entry to:**

**Editor TEXTILE INDUSTRIES, 806 Peachtree Street, N. E, Atlanta 5, Georgia.**

# ONLY KIDDE EXTINGUISHERS HAVE IT!

Only Kidde extinguishers have the patented Diffuser Horn that blankets fire with a cloud-like pattern of dry chemical, that cuts down on the danger from splashing of burning liquids. Even an inexperienced operator can attack a fire without fear from behind the "cool" protective wall of powder that's set up.

Only Kidde Dry Chemical Extinguishers give you all these extras.

Remember, if you want all the fire protection you can get for your money, get a Kidde Dry Chemical Extinguisher.

Kidde Dry Chemical Extinguishers can be used in normal standing position. Just pick up, point the horn, pull the trigger.
Streamlined diffuser horn gives better discharge pattern which provides greater space coverage and more protection for the operator.
Kidde

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**Walter Kidde & Company, Inc.**
**790 Main Street, Belleville 9, N. J.**
**Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.**

to insure identical procedures on all shifts.

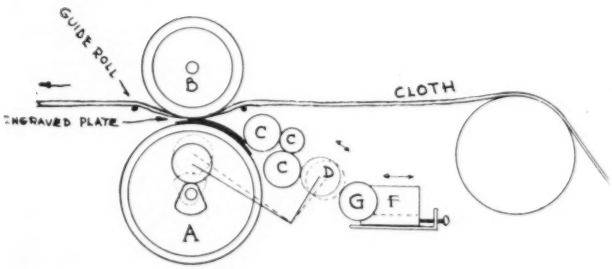
If a job is known to be subject to considerable fluctuation, and if the operative is likely to have idle periods, the overseer should note this fact in setting up the job standard so that he will have an alternative in the event he wishes the operative to perform some other duty during periods of partial idleness. There was a time when operatives used spare time to learn some other job or to help a fellow-employee who was "in the hole." Now that seniority is such a major factor in promotions, the tendency is for the operative to do no job that he is not paid to do.

Another advantage in having definite job assignments in writing is evident when new operatives are trained. Organized job assignments are helpful in planning job instruction and help prevent the omission of infrequently performed duties which the overseer or secondhand might forget if he trusted his memory solely.

CONTRIBUTOR No. 8470

# Mill-Made Machine Labels Finished Cloth

*This item was submitted in a kink contest.*




**ENGRAVED PLATE** is attached to pulley (A). Pulley (B) is covered with rubber and does not touch pulley (A). Pressure is applied only when the engraved plate comes in contact with the cloth. Three small cylinders (C) are covered with soft rubber for applying ink to to the engraved plate. Cylinder (D) transfers the ink from ink box (F) to the cylinders (C). Cylinder (D) reciprocates by action of a cam mounted on the same shaft with pulley (A). Ink box (F) may be adjusted by means of a screw set against the ink roll (G) to provide the proper amount of ink to the rolls. Roll (G) turns slowly and is driven by a cam on the opposite end of the shaft. The cam actuates a small metal arm which moves roll (G).

EDITOR TEXTILE INDUSTRIES:

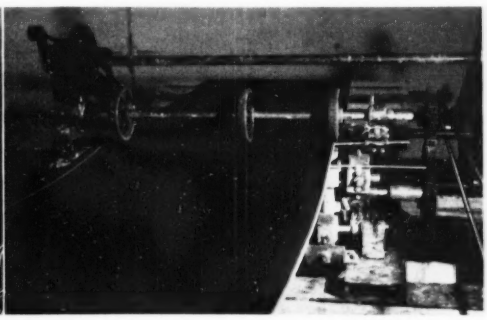
Oftentimes it is helpful and convenient to be able to distinguish similar cloths made in different mills. We decided to imprint a trade mark on the back of cloth made in our mill and set about devising a machine to do the job (see accompanying illustrations).

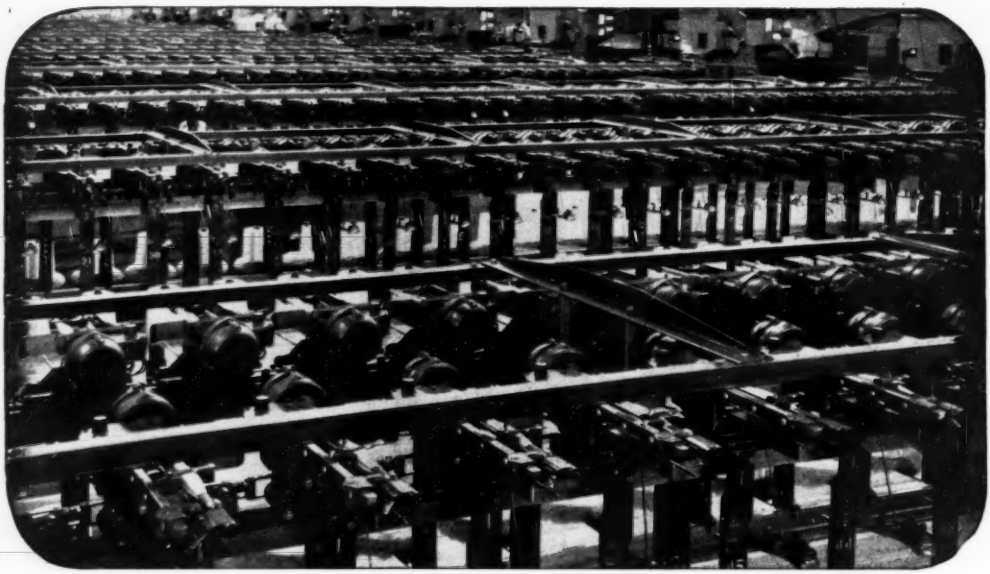
A simple machine was constructed in the mill shop and should be adaptable to any one of the machines used in the finishing plant so that the imprint does not require an additional process or raise the cost of production. The marking machine does not in any way affect the finishing processes where we use it.

The device is placed in the path of Sanforized cloth as it leaves the machine. The cloth moves between compressor pulleys and en-

**SANFORIZED CLOTH** is put through the marking machine. Manuel Iguiniz holds the cloth which is hanging from the machine. Note how the trade mark appears on both edges of the cloth and how it repeats. The mark "PARRAS SANFORIZADO" also appears on the back of the cloth in this instance.

**MARKING MACHINE** is located on top of the finishing machine. This picture shows the three compressor pulleys (B in sketch) so the machine can mark in three places: on both edges, and in the middle of the cloth.





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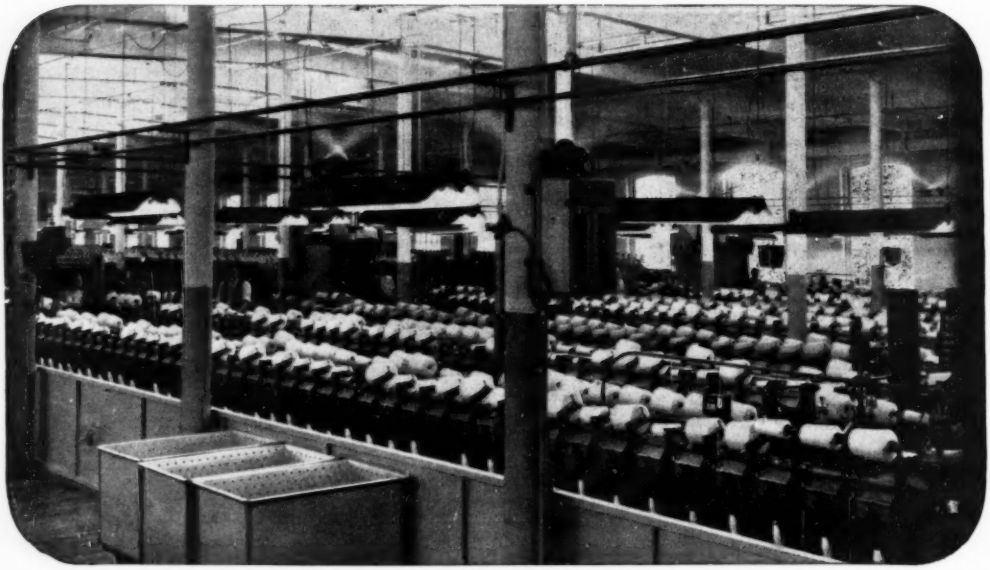

ABBOTT AUTOMATIC WINDERS REQUIRE ONLY ONE OPERATOR PER MACHINE. 800 TO 1000 BOBBINS WOUND ONTO CONES OR CHEESES PER HOUR PER WINDER.

**ABBOTT MACHINE CO., INC.**

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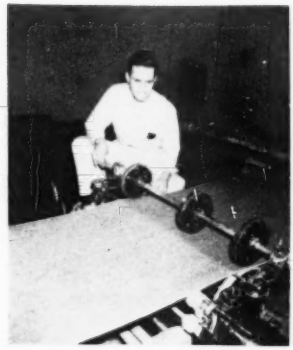
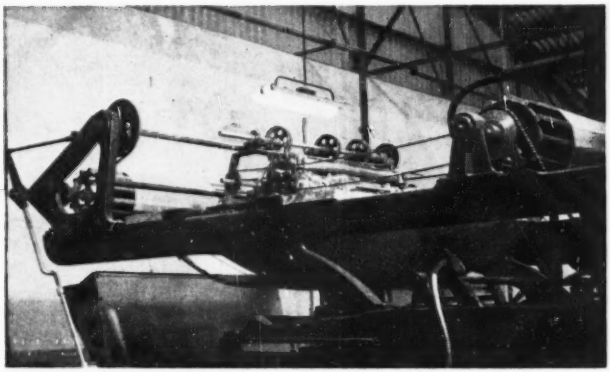
SOUTHERN OFFICE, GREENVILLE, S. C.



**TRADE MARK** is placed on Sanforized cloth by marking machine which is mounted on top of the cloth-handling machine. This picture shows the three compressor pulleys which press the cloth onto the printing plates.



**DRIVE ARRANGEMENT** for marking machine shown in between the two guide rolls. The marking machine is driven by a chain attached to the first guide roll.

graved plates mounted on wheels underneath the cloth. Every time the wheels make one revolution, the trade mark is imprinted on the cloth. The pulleys are driven by gears so that they have the same surface speed. The marking machine is driven by a chain from the main heated cylinder on the finishing machine. Both machines operate at the same speed at all times.

Three small rubber-covered cylinders supply ink to the engraved plate, and these cylinders also have the same surface speed as the pulleys so they will not abrade the plate; otherwise undesirable marks would be put on the cloth.

The marking machine does not require an extra operator because it is no trouble for the finishing machine operator to take care of it. The ink that is used in stamping is similar to that used in print shops, and the price is small compared to the benefits of producing cloth imprinted with the mill trade mark—a feature which should serve as an advertisement.

MANUEL IGUINIZ, JR. (*Mexico*)

# Picker Lap Charts Need Checking?

EDITOR TEXTILE INDUSTRIES:

I have written several short articles on picker laps for the HOW OTHER MEN MANAGE department of TEXTILE INDUSTRIES, and I should like to comment further on picker laps.

At our mill we consider the picker lap of prime importance in making quality yarns used in weaving industrial fabrics. The fabrics are made to specifications, some of which are very strict.

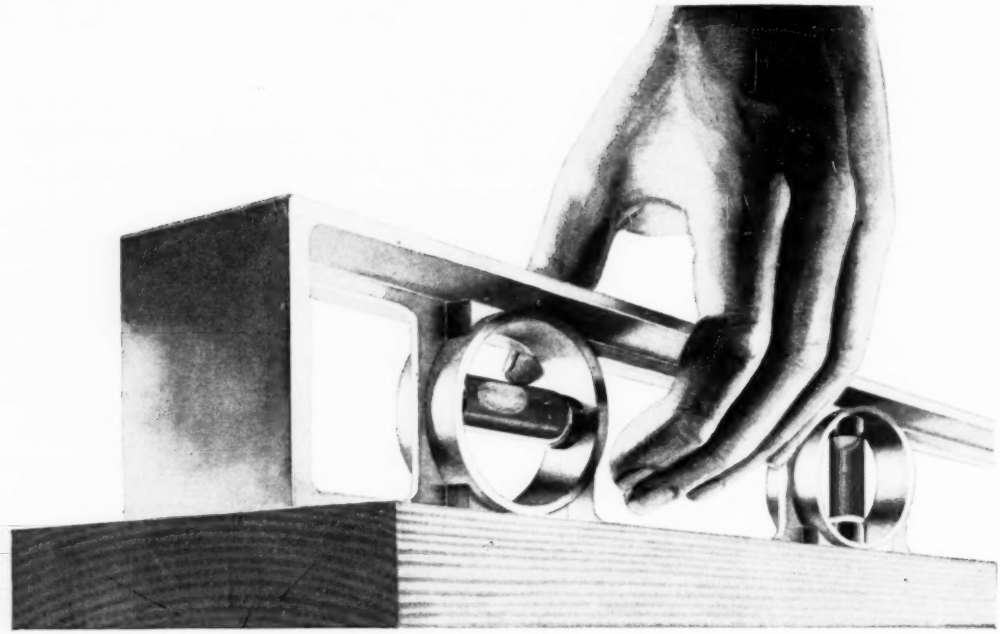
We have very few doublings in our processing, so there is little opportunity to correct unevenness once it occurs. Precautions are observed at every preparatory process to prevent any unnecessary irregularity.

Although we like for our yarns to have good appearance, our main objective is to secure regularity and strength. Tensile strength is a major requirement in the manufacture of most industrial fabrics, so it is necessary that we emphasize tensile strength and evenness (which contributes to strength) in the production of the yarns which go into these fabrics.

The importance which we attach to the evenness of the picker laps, and the difficulties which we have in attaining this objective, explain to some extent why we should like to see more discussions on pickers and picker laps in HOW OTHER MEN MANAGE.

For several months we thought that we were making just about the best picker laps to be found anywhere—at least our lap meter charts indicated that this was true. It was not unusual for us to make laps with a coefficient of variation of .80%; 1.00% was common, and sometimes we tested laps which showed a coefficient of variation of only .50%. When these low figures were not reflected in the tests which we made in the subsequent processes, and when the yarn remained as uneven as ever, we began to suspect that something was wrong somewhere and that perhaps our picker laps were not really as good as we thought they were.

*We finally discovered that the*



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*bearings in the scale of the lap meter were badly worn; therefore the scale was no longer sensitive enough to give accurate weighings. We installed a new scale, one that was quite sensitive, and we no longer got the beautiful charts which we had been getting. We had just been fooling ourselves.*

Then we had to get busy and start working on the pickers. We overhauled them completely, replacing bad beaters, grid bars, and screens. We paid special attention to evener motions, making sure that every part was free enough to operate when necessary. We checked roll diameters and gear trains in an effort to produce laps of as nearly the same length as possible. We installed a pneumatic pressure system to maintain even pressure on all our laps. We put on a chain drive for the lap head so that the lap will not continue to turn after the proper length has been run and the knock-off gears have released the lap racks.

Plans had already been made to modernize our opening room, and the program was completed on schedule. Then we began to give a great deal of attention to feeding the pickers, especially regarding the handling of white waste which has to be re-run. There has always been a tendency for our cotton openers to try to get rid of the waste by feeding it in as quickly as possible. Then there would be a period when no waste at all would be fed. This practice caused considerable fluctuation in the weights of our picker laps, and it was exceedingly difficult for the picker tenders to keep the laps within the established tolerance; furthermore the laps were very uneven, yard for yard.

Knowing the approximate amount of white waste that we could expect to run each day, we devised a plan for having this waste fed in such a way that some waste would be going into the mix at all times.

The handling of rejected picker laps has always been a problem, so one of our men devised a method of slowly feeding these laps into the hoppers of two of the pickers. This seemed to work fine until we noticed that every time we tested a lap from one of the pickers equipped with the rejected-lap feeding device, the graph line went all over the chart. This continued to happen, and we tried stopping the feeding of the rejected lap and tested the resulting lap. We got a good chart and repeated the tests. Bad charts were produced when feeding the rejected laps and good charts were produced when no rejected laps were re-run. We have stopped using the rejected-lap feeding device until we can find a way to improve it.

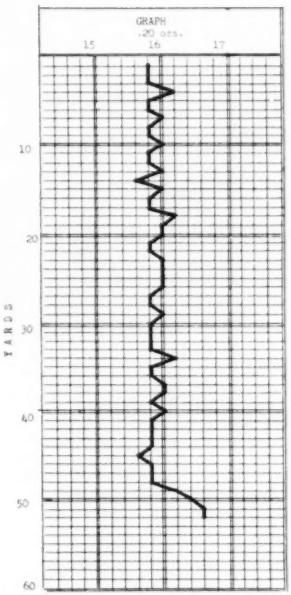


**CHART A.** Note three heavy yards at bottom of chart. Heavy portion is next to lap pin.

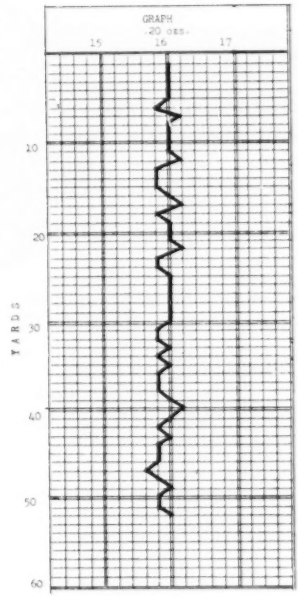


**CHART B.** With proper start-up there are no heavy yards next to lap pin, as shown here.

With the pickers in better mechanical condition, with more modern opening equipment, and with better control of the feed we began getting much more even laps (shown by the lap meter charts), except for the start-up. The first one, two, or three yards wound onto the lap pin were on the heavy side. Of course in laying laps on the cards, half a yard or more will be torn off, but not two or three yards. Although our sliver, roving, and yarns had shown some improvement, there was still too much irregularity. We were sure that the heavy yards were contributing to irregularity.

Was it the machine (picker) causing the heavy end, or was it the man (picker tender)? For one week the overseer of carding personally observed the start-up of every lap tested. He had previously instructed all picker tenders regarding the correct procedure for starting the pickers. The picker tenders were shown importance of getting the logger-heads down as quickly as possible to start the lap under pressure. He also showed them how necessary it is for the lap to start winding evenly around the lap pin.

Almost without exception the start-up of the laps tested was within the range of the yards in the main body of the lap. The extreme variation range (six times the coefficient of variation) for all the laps tested that week was only slightly over 7.00% as compared

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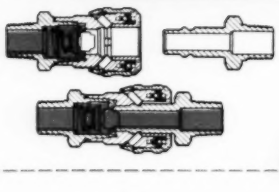
### HANSEN PUSH-TITE COUPLING

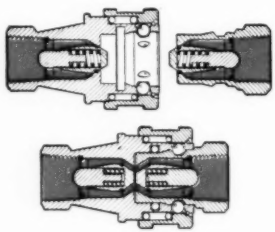
**Shuts off one side of line**

Gives quick connection and disconnection, with instant automatic flow or shut-off. To connect coupling, and open line to flow of fluid, merely push plug into socket. To disconnect, a slight pull on sleeve releases plug and shuts off supply end of line.



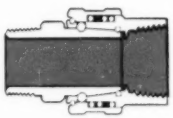
### HANSEN HIGH PRESSURE TWO-WAY SHUT-OFF COUPLING

To connect, pull back sleeve and push plug into socket. Identical torpedo type valves permit free flow of gas or liquid through coupling. To disconnect, pull back sleeve..coupling immediately disconnects, valves automatically seal both ends of line. Can be mounted to disconnect automatically where fluid lines may be subject to sudden, damaging strain.



### HANSEN STRAIGHT-THROUGH COUPLING

Provides quick connection and disconnection, but does not have shut-off feature. Size range for general use from ¼" to 2½". Two special types of straight-through steam couplings also available—one for low pressures, and one for high pressures.



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to more than 10.00% for tests made during previous weeks.

Upon noting the range of variation we realized what a small amount of stock is necessary to throw the weight of the lap out of tolerance. A lap weighing 16.25 ounces to the yard will weigh only .45 ounces per inch.

If two or three yards are not under proper tension, a difference in weight per yard will be evident. When every lap tested shows heavy yards all of the laps produced are likely to have the heavy yards at the start-up. The difference is reflected in excessive variation later on.

Chart (A) was made from a lap where no special care was taken to get a good start-up. Chart (B) was the result of a lap meter test on a lap that was started up correctly. The comparison is very striking.

I think that we have made some improvement in our picker laps but we are still not satisfied. I hope that this article will provoke further discussion on pickér laps by the readers of HOW OTHER MEN MANAGE.

CONTRIBUTOR No. 8473

# Extra Blower Helps Clean Spooler

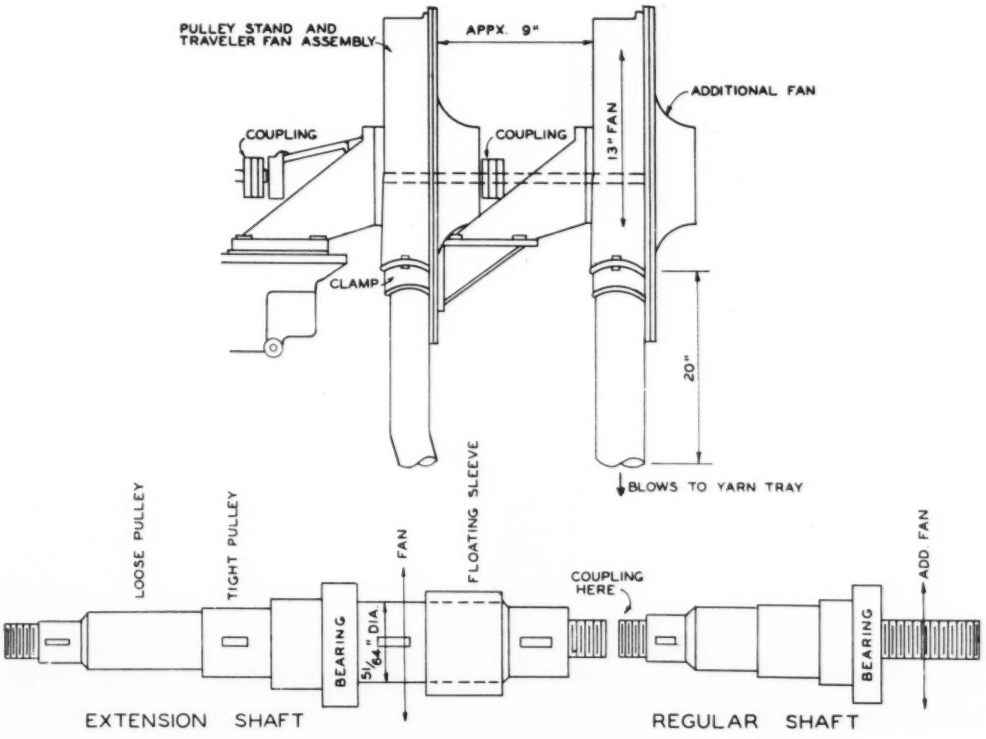
*This item was submitted in a kink contest.*

EDITOR TEXTILE INDUSTRIES:

Leaf, trash, and lint that would tend to accumulate on yarn in the spooler trough is blown off by the extra blower attached to knotter head on B-C spooler (see accompanying illustration). The stream of air from the blower is directed through the pipe and into the yarn trough.

No accumulation of leaf, trash, or lint is possible with the use of this blower; any trash or lint already present on yarn is removed by blower after yarn is placed in trough.

The extra blower is similar to the blower already on the knotter head and is easily installed by using another pulley stand which is attached to a piece of flat iron



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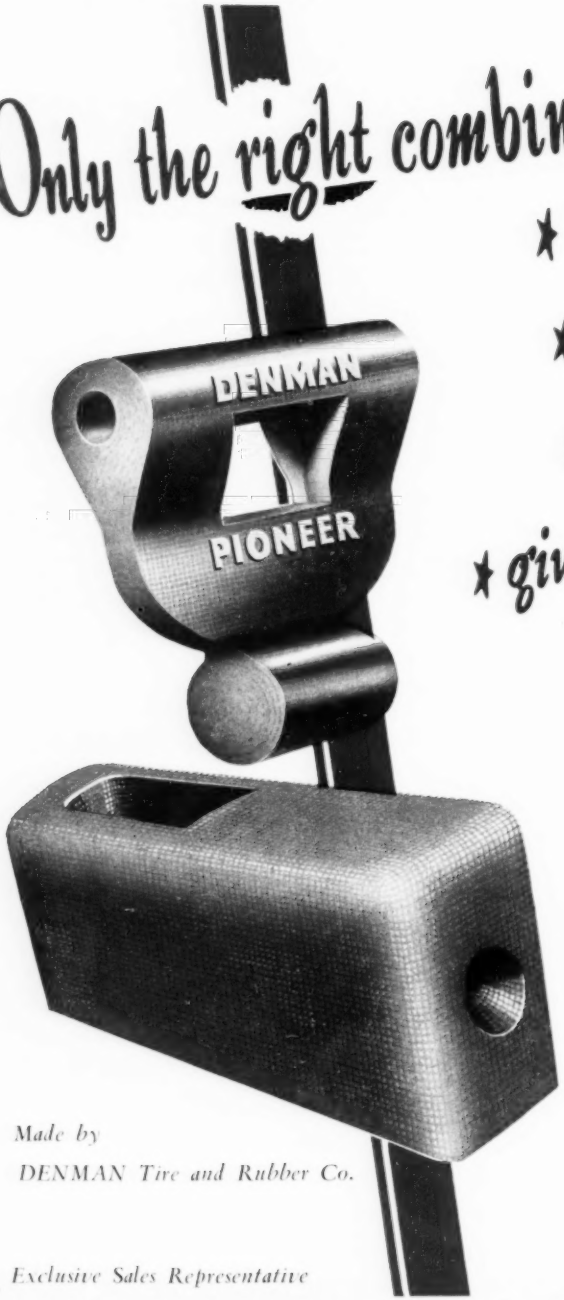


The running and wearing qualities of Denman Pioneer pickers have been developed to the *exact* degree at which maximum loom economy becomes possible . . . *correct hardness*, to assure long, tough picker service without damaging shuttle points . . . *outstanding resiliency*, to cushion heavy shuttle blows without damage to loom parts . . . *absolute uniformity*, to insure perfect shuttle throw without excessive wear.

For operating efficiency, combined with total loom economy, most mill men choose Denman above all other pickers.

*Made by*
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## The TERRELL MACHINE CO., Inc.

CHARLOTTE, N. C.

bent to 90 degrees and mounted on the fan case cover in the proper position. This position allows an extension of the fan shaft to drive the added blower.

See sketch for construction of extension shaft and application on knotter head. Note that the extended shaft is used in the regular blower and the regular shaft in the added blower.

CONTRIBUTOR NO. 8466

# Carding Waste

EDITOR TEXTILE INDUSTRIES:

We have two cards running on 60-grain sliver and carding 25 lb per hour. Loose strips are fed into the cards from Bramwell feeders. The sliver is used as a core for braided products, consequently uniformity is more important than appearance.

Before the continuous strippers and Bramwell feeders were put on the cards, we were making our own laps and running them on the two cards. We were having to strip them every hour, and a set of cylinder clothing usually lasted about two months.

The continuous strippers and Bramwell feeders were put on over six months ago, and we have had no trouble with the present clothing. Now the cards are ground only half as much as before. Cylinders and doffers are being stripped by hand every eight hours; whereas before installation of continuous strippers it was necessary to strip every hour.

Sliver made with the Bramwell feeder was found to be even and in many instances better than that made from laps. Savings from this set-up are considerable because laps are not needed, and the cards get much higher production with the continuous strippers in action. It is easy to attach the Bramwell feeder to the back of the card. The biggest problem is to adjust the rate of feed correctly for the weight of sliver desired, but once the rate of speed has been established, it is a simple matter to put the machine into production.

CONTRIBUTOR NO. 8450



# Ammonia Frees Loom Bearings

*This item was submitted in a kink contest*

EDITOR TEXTILE INDUSTRIES:

Most of us who have installed and set-up new looms have run into trouble with bearings "freezing." It is a common complaint, and one that can take plenty of time and trouble to correct.

I remember one time at a large mill in Greenville, we were putting in new, S-5 looms, and we were having plenty of bearing trouble. Two loom fixers and I were having a particularly tough time with one loom, and our patience was strained, to put it mildly.

We had been working on the loom about two hours without success, when one of our sweepers moved by, pushing his broom, and he stopped to watch us. After a few seconds he said, "Mr. Blank, I was once an automobile mechanic, and I think I can tell you how to get that loom started." I was by that time ready to listen to anybody suggest anything, so we stepped back and offered him the job.

He sent to the First Aid Room for a little ammonia, and I felt sure we had him then, for we had tried alcohol, Varsol, penetrating oil, and kerosene. When we had the ammonia, I put a few drops in each oil hole on every bearing, and when we tried to move it, it moved! With a little more ammonia, we had the loom running.

In the years since that, I have started many different types of looms in several mills, just by putting a few drops of ammonia on a frozen bearing. It has never since that time taken more than fifteen minutes to loosen a frozen bearing.

CONTRIBUTOR NO. 8463

# How to Fix Thread Cutters

*This item was submitted in a kink contest.*

EDITOR TEXTILE INDUSTRIES:

I have had trouble with the Stafford thread cutters. They operate satisfactorily in cutting the filling threads; however after operating for some time the mechanism does not hold the thread until the temple knife can cut it at the selvage of the cloth. The fiber clamp in the cutter is narrow and the thread wears a groove in the fiber, thereby letting the thread slip through the clamp before the thread cutter on the temple can cut it. The loose thread is often jerked back into the cloth and makes knots in the selvage. The jerkbacks make an ugly and undesirable selvage.

Some fixers just put in another new fiber clamp, but this is too expensive to put on just because a small groove is worn in the fiber clamp. I put in an extra clamp holder blade and arranged it so the thread would be brought between it and two other blades. Addition of the two clamping places causes the thread to be clamped three times instead of one, so the extra clamps solved the problem. The thread cannot slip through all of the clamps; it would break before it would slip. I ordered some long screws to accomodate the extra blade. This is the best arrangement I have seen to overcome jerkbacks. CONTRIBUTOR NO. 8462

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**NIAGARA TWIST-SETTER**
Yarn Conditioning Penetrants

John Q. Public seems to expect all chemists to be a blend of wizard, prophet and walking encyclopedia.

SEYCO chemists and technical men are only human, same as the rest of us—but often the results they produce seem miraculous.

(Want a miracle done on a new cloth style? We don't do 'em every time, but our batting average is pretty high.)

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## Unirail Uptwister

*(Continued from page 63)*

INDUSTRIES for July, 1950, page 132.)

Improved yarn quality is said to be achieved by straight threadline delivery, reduction of vibration, freedom from oil dispersion, reduced over-all tension and less yarn handling by operators. Better bobbin build results from improved traverse motion with adjustable ribbon breaker, the manufacturer states.

Simplified installation derives from factory pre-erection and run-in and shipment of standard machines in three sections. Increased production stems from higher spindle speeds and less operator handling time.

Lower power cost is brought about primarily by the new "Uniflex" spindle which is designed to cut down vibration, reduce bearing loads, and permit safe speeds up to 16,000 rpm under satisfactory conditions. (Detailed information about this spindle appears on page 164.)

Less maintenance results from annual lubrication of spindles, idlers, take-up shaft bearings, and leakproof twist unit. Freedom from oil dispersion reduces lint accumulation and minimizes cleaning. Longer life is indicated by the virtual freedom from vibration effected by the new spindle, and by the rugged spindle bedplate construction.

Unirail uptwisters are offered in headless package and bobbin take-up models. The latter provides a bobbin or finger hanger option.

*Universal Winding Co., Cranston, R. I.*

For additional data, request item G-104, using business reply card on page 200.

# NEW Equipment AND MATERIALS

***Other items are described on pages 61 and 63***

## Sizing Cylinders Made from G-E Laminated Plastic

A special moisture-resistant machining grade of G-E Textolite laminated plastics tubing has been developed for textile applications. The new laminate is in production at the General Electric's Chemical Division plant in Coshocton, Ohio, and is presently being used for the manufacture of sizing cylinders by the Wood Plastics Company, Wayne, Pa.

Development work on this application, done by G. E. in conjunction with the Wood Plastics Company, is reported to have produced sizing

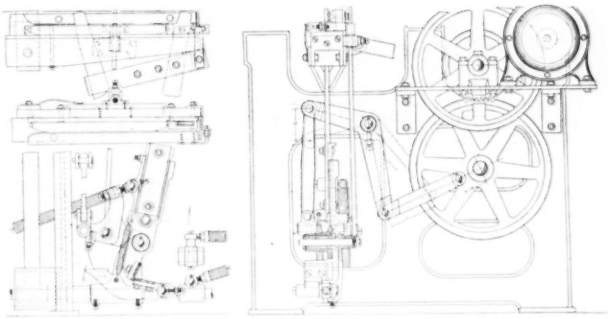
## New Picking and Shuttle Control Motions Provide Smooth Operation, More Production

Looms equipped with picking and shuttle control motions shown in the accompanying drawings are simple, strong, and smooth running, the manufacturer reports. Also, up to 50% higher production is claimed.

No cams and rollers are utilized—the motions are self-powered by a crank arm on each side of the loom for each picker stick, being driven by the cam shaft. Each crank arm drives a lever mechanism with an upward and downward movement. The downward movement pushes the picker stick back to its loaded position and locks it with a catch.

The catch is designed to lock the picker stick, when it is loaded, in the right place in the shuttle box for the automatic quill transfer. It is then ready for release at the right time. When the lever mechanism is on its upward movement, this catch is released.

The shuttle encounters no hard, jerky or harsh motion whatever, the manufacturer claims. A long coil spring does the work, sliding the shuttle out of the box with exactly the same positive speed on every pick made. Parallel motions are said to be unnecessary because of the smoothness with which the shuttle is pushed out of the box.



Other features claimed for the mechanism include: Shock to driving gears and motor is eliminated; less power is required; motor is directly connected, eliminating need for friction plates or clutch; shuttle life is longer; adjustments are provided for light and heavy picks; loom can be started at any point of crank shaft revolution.

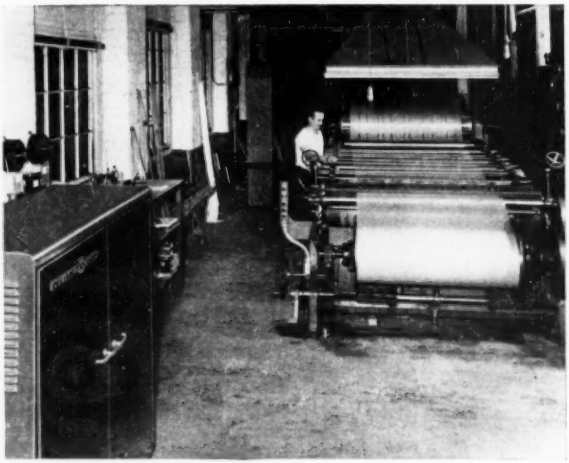
The motions can be installed on old and new looms.

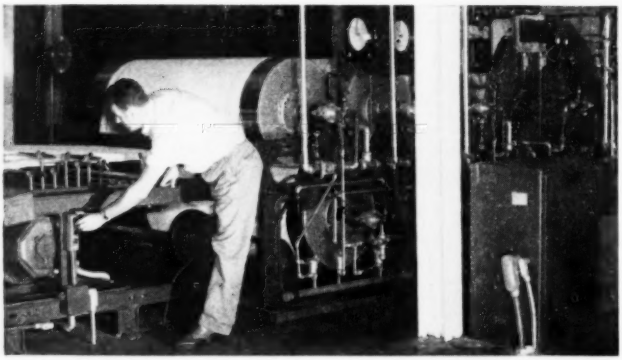
*Trautvetter Loom Works, 262 Totowa Ave., Paterson, N. J.*

For additional data, request item G-109, using business reply card on page 200.

## More flexible control of slashers typifies performance which makes RELIANCE V•S *preferred drive in the textile industry . . .*

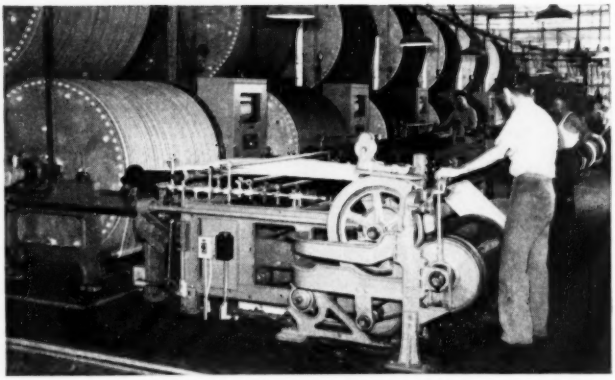
Multi-motor Reliance V•S Drive, with V•S electronic controls, provides greater operating flexibility for this slasher. This flexibility includes slow, stable creeping speed; pre-set running speeds and smooth, adjustable rates of acceleration and deceleration. The all-electric, adjustable-speed V•S Drive also provides stepless speed change for moisture control and maintains constant tension during beam build-up.





Electronic controls, integrated with Reliance V•S Drive, make independently adjustable acceleration and deceleration of slasher to pre-set speeds a simple matter of rheostat adjustment while machine is at rest or during production. Reliance electronic controls have no mechanical limitations —they provide extremely wide ranges of accelerating and decelerating rates.

Easy-to-operate controls of the Reliance V•S Slasher Drive are conveniently grouped and located where operator can quickly and safely control his machine. Completely-packaged, factory-wired V•S Drive saves space —is easy and inexpensive to install, simple and economical to operate, requires a minimum of maintenance. More complete details available to textile mills and equipment manufacturers in Bulletin K-2025 and in Bulletin D-2311 on Reliance V•S Drives from ¾ to 300 horsepower.



*Sales Representatives in Principal Cities*

RELIANCE ELECTRIC AND ENGINEERING CO.

1085 IVANHOE ROAD, CLEVELAND 10, OHIO

**Textolite cylinders for sizing nylon and silk (Wood Plastics).**

cylinders of exceptional durability and long service. The cylinders have excellent moisture resistance, it is claimed, as well as high caustic and acid resistance. They are presently being used to handle nylon and silk.

Light tan in color, the cylinders measure 7" long, have an I.D. of 5⅝", with a wall thickness of ¼". Being concentric inside to outside, smooth performance is obtained. The exteriors of the sizing cylinders are sanded and buffed to produce an exceptionally smooth finish. There is no danger of color bleed, the announcement stated.

*Wood Plastics Co., Wayne, Pa.*

For additional data, request item G-116, using business reply card on page 200.

## Sequestering Agent Highly Versatile

A sequestering agent now available is said to be capable of binding metal ions in an inactive, though soluble, state, thereby protecting critical boil-off, dyeing, and bleaching processes from the effects of erratic contamination by metal salts.

The manufacturer states that with this new product, which is designated Sequestrene, many wet processing operations can often be improved beyond what is now conveniently accepted as the satisfactory standard. For example, it has been demonstrated that greater uniformity in dyeing can be achieved from lot to lot. Improved money value, notably in vat dyeing, is made possible. Brighter dyeings with chrome colors and many cotton colors are realized. Reduced crocking, particularly of naphthol colors, and better results in bleaching, scouring, and kier boiling can be obtained when soluble metal salts are successfully deactivated by Sequestrene.

Sequestrene is described as a sodium salt of ethylene diamine tetra acetic acid. The sequestering properties of Sequestrene are the result of its ability to remove metal cations from solution by a twofold combination of primary valence bonds, through ionization, plus secondary forces which firmly lock the metal ion in a stable, non-ionizing ring structure.

The agent is available as the di, tri, and tetra sodium salts of ethylene diamine tetra acetic acid. The tetra sodium salt is available in both powder and liquid forms.

*Geigy Company, Inc., 89-91 Barclay St., New York 8, N. Y.*

For additional data, request item G-117, using business reply card on page 200.

Truck equipped with overhead guard to protect operator (Towmotor).

## Overhead Guard Protects Fork Truck Operators

Maximum protection for fork lift truck operators in high-stacking multi-unit loads is said to be assured with the Towmotor Overhead Guard, a standard fork lift truck accessory. Sturdily constructed of 1½-in. and 2-in. steel pipe, the overhead guard is recommended for use on all lift trucks with a lift exceeding 144 inches.

Handling heavy cartons without pallets is one of the time-saving features claimed for another Towmotor development—the Carton Lift. Two cartons are lifted at one time by placing the device in contact with the bottom carton, and raising the carriage. This moves the spade-like arms of the Carton Lift up and under the inter-locking cover flange, assuring maximum load stability for any handling operation. The Carton Lift is quickly interchangeable with standard forks. The arms can be adjusted laterally to handle cartons of varying widths.

*Towmotor Corporation, 1226 E. 152nd St., Cleveland 10, Ohio.* (G-601)

## Titanium-Base Duller for Viscose and Acetate Fabrics

A new dulling agent for viscose rayon and acetate fabrics is reported to be equally effective on whites and colors.

Dextrol Duller No. 3925, a high titanium-content dulling agent, is said to be particularly effective with urea formaldahyde resins. Added directly to the resin mix, it readily disperses throughout the solution. Storage life is good, the manufacturer claims.

*Dexter Chemical Corp., Boulevard P. O. Box 1, New York 59, N. Y.*

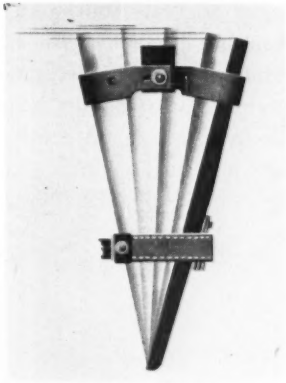
For additional data, request item G-111, using business reply card on page 200.

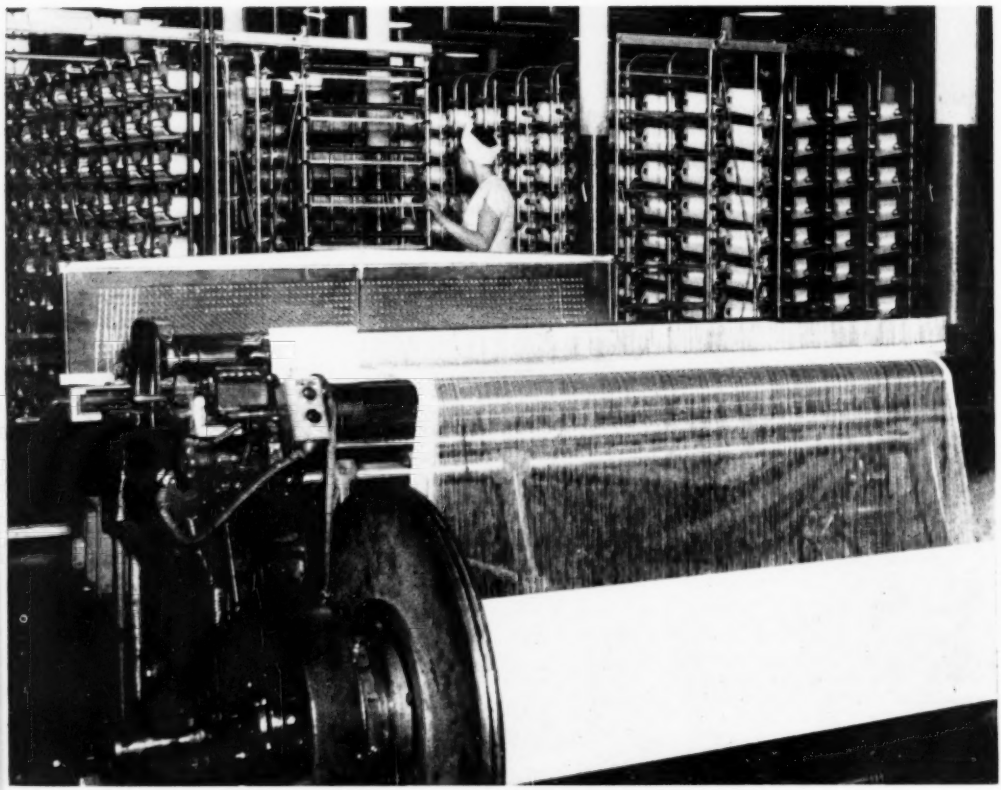
## Check Strap Features Satin Finish

Recently developed was the "Bicut" check strap with a smooth, satin-like finish which, according to the manufacturer, permits more efficient checking action.

The Bicut "hairless" strap is also said to be stronger because the leather is compressed more, resulting in a more dense accumulation of

**Rhoads "Bicut" check strap.**





# Promises or Performance?

IT'S EASY to make a promise—but when it comes to the right lubricants in your machines —it's the *performance* that counts.

For 66 years Standard Oil lubricants have been first in popularity in the Southern textile industry because of performance. Standard Oil lubricants are refined by the most modern methods from the highest grade crudes, in unvaryingly high quality. Rigidly controlled tests during manufacture are taken to assure lubricants that have high resistance to oxidation and an ability to maintain body under extreme temperatures.

No matter how complex your lubrication problems may be, a Standard Oil lubrication engineer will be happy to survey your plant and blueprint your requirements. Backed by the largest combined facilities in the world for research and testing petroleum products, he offers you the most authoritative service available.

STANDARD OIL
LUBRICANTS

**Standard Oil Company**
(KENTUCKY)

## NEW Equipment AND MATERIALS

leather fibers in the given area as designated by the thickness specifications.

*J. E. Rhoads & Sons, 35 N. Sixth St., Philadelphia 6, Pa.*

For additional data, request item G-115, using business reply card on page 200.

### Hydraulic Core Jack

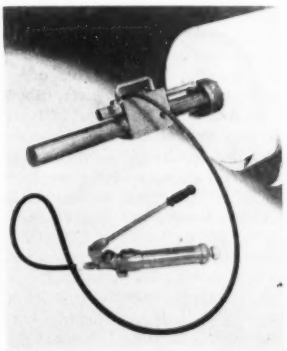
For driving cone type chucks into mill roll cores on unwind shafts, the Dusenbery hydraulic core jack was developed. According to the manufacturer, the two-ton force of the ram can drive a cone into the core of a mill roll far more effectively than the impact of a heavy sledge hammer or most types of screw jack arrangements.

This primary advantage is said to be gained with less operator fatigue with no danger of injury to equipment and in less time than by former methods. Loosening and damage to the mill roll core while unwinding are completely eliminated, it is claimed.

Standard Model 560 core jack is available to fit unwind shafts up to 2⅜" in diameter. Sleeves are available to adapt one jack assembly for several shaft diameters.

Equipment can be clamped into working position with three screws without any modification of existing unwind shafts. However, the manufacturer states, set-up time can be reduced to a minimum by through drilling the pay-off shaft for a ½"

Hydraulic core jack (Dusenbery).




Why skilled workmen Choose RIDGID PIPE VISES

8 sizes for pipe from ⅛" to 6"

It's extra easy to work with RIDGID Bench Yoke Vises

★ All have handy integral pipe rests and benders.

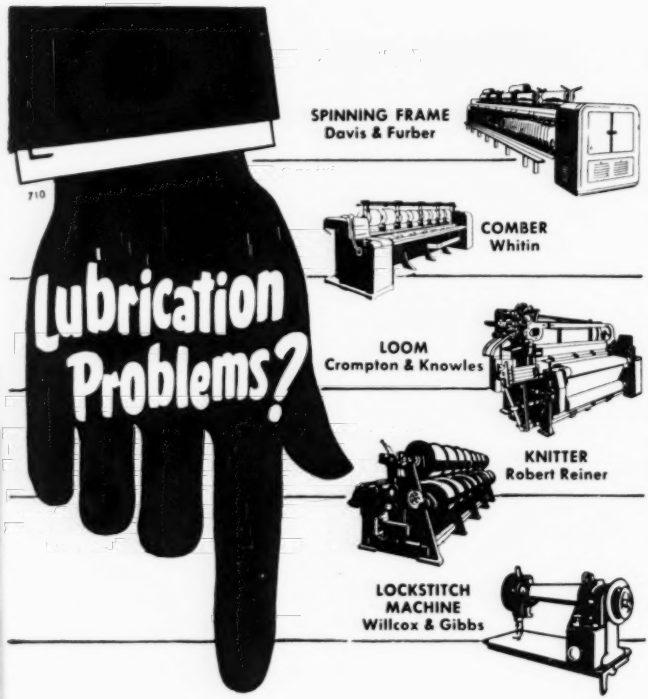
★ Yokes and bases of strong special malleable; top quality tool-steel jaws—LonGrip jaws up to 6" capacity.

★ Made in bench, post, kit, stand and tristand models. Chain vises in bench, post, stand and tristand models.

★ Buy work-saver RIDGID vises at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools




*not on these machines!*

**...they're all BIJUR equipped**

Each maker of these machines had your best interest in mind when he built-in a Bijur lubricating system. Human carelessness and forgetfulness are eliminated by machines having built-in Bijur lubricating systems. These machines will never be shut down because they lack continous, proper lubrication. Make certain the machine you buy is furnished with a Bijur lubricating system.

*Write for Bulletin 6A*

**BIJUR**

**LUBRICATING CORPORATION**

Rochelle Park • New Jersey

## NEW Equipment AND MATERIALS

diameter pin to hold the body of the core jack into working position.

Standard equipment includes hand pump with hose and couplings, ram and ram housing. Sleeves for adapting ram housing to more than one size of unwind shaft are available as extra equipment.

*John Dusenbery Co., Inc., 271 Grove Ave., Verona, N. J.*

For additional data, request item G-101, using business reply card on page 200.

### Solvent for Permanent-Type Hosiery Transfers

Laurel Transfer Solvent 622-C for the removal of permanent-type hosiery transfers prior to redyeing is described as a specially prepared compound of powerful solvents which may be used in regular dyeing machines, working effectively in either one-time or standing baths.

Depending on plant conditions, and within the product's minimum and maximum range, the solvent will remove all types of hosiery transfers, from the ordinary to the permanent type, the manufacturer claims.

*Laurel Soap Mfg. Co., Inc., Tioga, Thompson, and Almond Streets, Philadelphia, Pa.*

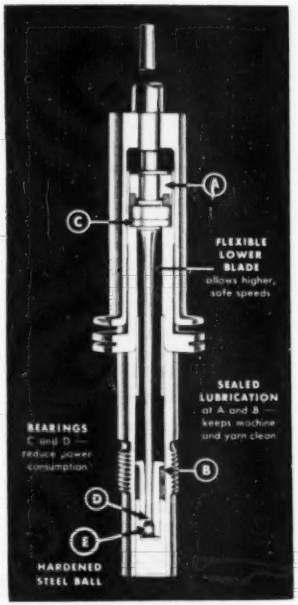
For additional data, request item G-107, using business reply card on page 200.

### Speeds up to 16,000 rpm with New Uptwister Spindle

More uptwisting production per square foot of floor space, lower power and maintenance costs, and cleaner yarn are advantages which the manufacturer claims for the "Uniflex" spindle developed for use on endless-belt-drive uptwisters. (Shown at Atlantic City in May, 1950, but just now available.)

Spindle speeds up to 16,000 rpm under satisfactory conditions are said to be practical. Design of the spindle is reported to be such that it lowers bearing loads to a minimum, reduces oiling and cleaning cycles, and eliminates oil dispersion.

Key feature cited for the spindle design is its slender, flexible lower blade which allows off-center rota-




**"Uniflex" spindle by Universal.**

tion of bobbins that are not perfectly balanced without building up excessive bearing loads. Size and location of bearings and sealed-in lubrication system that eliminates free oil in the spindle step are also contributing factors to the advantages offered by the spindle, according to the manufacturer.

*Universal Winding Co., Cranston, R. I.*

For additional data, request item G-105, using business reply card on page 200.

## New Book on Color

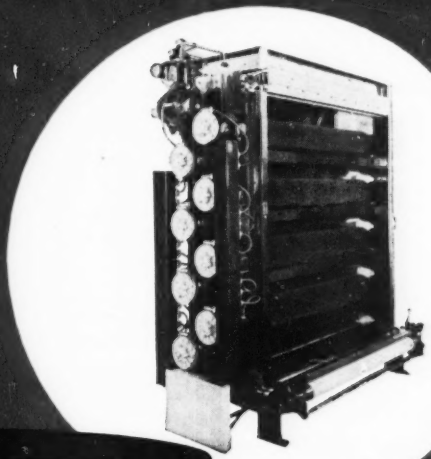
"The key to color problems of the future is to be found in visual psychophysics mixed with a liberal sprinkling of common sense." This quotation is from the preface to the recently published book *Color in Business, Science, and Industry*, by Deane B. Judd of the Photometry and Colorimetry Section, National Bureau of Standards.

This book is an attempt to present visual psychophysics in terms that are practically useful, Dr. Judd said.

First, it tells how the eye works; secondly, it lists the tools available to assist in color measurement; and finally, it shows how to select the best tool for a given color measuring job.

Typical of the subjects dealt with

METLKOR BRUSHES PREFERRED



NEW HERMAS MOTORIZED BRUSH

"Most of our customers prefer METLKOR BRUSHES," states the Hermas Machine Co., well-known manufacturer of clothroom equipment, "because:

"—The cores never warp or get out of alignment . . .

"—Bristles don't fall out . . .

"—Rolls are balanced to prevent whipping.

"—All of which is conductive to long brush life and even brushing."

Hermas uses METLKORS in this new motorized brushing machine, as they have in other Hermas brushes, because of their superior performance.

The metal cores, of aluminum, cold drawn steel, stainless steel, copper, or bronze, cannot sag, split, or get out of alignment.

Bristle is wound on the cores by our patented roll-lubin process, firmly held with flat metal wire, and sealed with special baked plastic cement.

* Reg. U. S. Pat. Off.

1877 • DIAMOND JUBILEE • 1952

M. W. JENKINS' SONS, INC.

Three-Quarters Century of Pioneering Brushes for Industry

Cedar Grove, Essex County, New Jersey

TELEPHONE Verona 8-5327

LET'S TALK ABOUT *know-how*

Mr. Webster defines **KNOW-HOW** "Technical expertness and accumulated practical skill in lining up a complicated operation for smooth and efficient execution."

Now, that's exactly how we regard our ability to engineer your textile mill conveyor layout. This skill is backed up by so many important examples in so many successful mills.

*We don't know all the answers but we really do know our conveyors and what they can do to help you save money and conserve manpower.*

*Is your product handling as efficient as it should be? One of the best ways to find out is to talk to an expert.*

*May we suggest you contact Alvey right now.*

ALVEY

ALVEY CONVEYOR MFG. CO.

9306 Olive St. Rd., St. Louis 24, Mo.

ALV-17

BRANCHES IN ALL PRINCIPAL CITIES

## NEW Equipment AND MATERIALS

are: When to use a spectrophotometer, a photoelectric colorimeter, and when to use both; what the recording and non-recording spectrophotometers will and will not do; practical value of the Munsell and Ostwald color systems, etc.

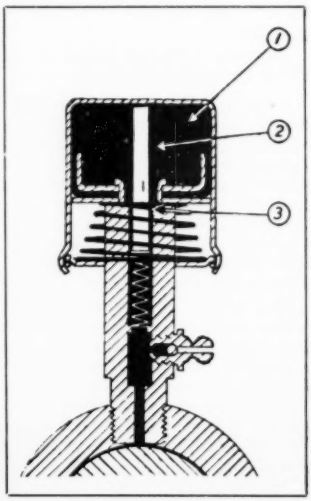
Publisher: John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.

### Automatic, Self-Feeding Pressure Grease Cup

Absolute lubrication reliability is one of the principal advantages cited for an automatic lubrication device now on the market—a self-feeding pressure grease cup designed to replace grease fittings and all types of grease and oil cups.

Designated the "TMCO Automatic Lubricator," the device consists of a threaded stem equipped with a standard grease gun type fitting and spring pressure type grease container that indicates the amount of grease

**TMCO AUTOMATIC LUBRICATOR.** Sketch shows cup half fed out (note position of cup on stem). Key to numerals: (1) grease; (2) As cup feeds, the top of the cup meets the valve stem and causes the valve to open, permitting grease to flow down through channel (3).



in the container by the position of the container on the stem.

It operates by the combination of vacuum and compression. Vacuum is created in a bearing by the motion of the shaft when there is an air space, the manufacturer claims. It is the combination of that vacuum and the pressure of the compression spring in the cup that discharges grease to fill that air space. Grease is said to be fed into the bearing only while it is in use and then only when grease is required.

Container and stem have a capacity of approximately ½ ounce of grease. Compression for varying types of grease, bearing fits, and lubrication requirements can be adjusted by changing compression springs.

Solidified oil grease and soft semi-solid grease may be used in the appliance.

Other benefits said to be derived from the use of this device are: more efficient lubrication, longer bearing life, more production, less labor, grease consumption reduced, contamination and discoloration eliminated.

According to the manufacturer, the device operates efficiently in any position and can be adapted.

*A. L. Watson Co., 38 Crown St., Milton 87, Mass. (G-901).*

## "All Purpose" Quill Developed by American Paper Tube

A new "all purpose" synthetic automatic loom bobbin incorporates a combination of features which, according to the manufacturer, permits mills to secure maximum efficiency of performance with all kinds of yarn on the same bobbin.

A tip that is said to be virtually indestructible has been added to the laminated barrel which has the strength to withstand nylon and other hard twisted yarns, and is impregnated so as to be unaffected by treatment of yarns requiring conditioning. The barrel surface, at the same time, is, the manufacturer claims, most suitable for proper retention and free delivery of soft twist yarns and filament yarns.

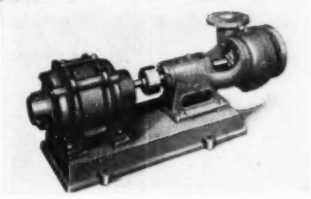
The solid, impact-resistant tip of thermosetting plastic is incorporated as a homogenous unit with the barrel by means of the "Plasti-weld" plastic molding process which is also used to form the base of the bobbin with its three continuous metal rings molded into the plastic.

High precision of alignment and positive protection against mis-position in transfer are other advantages

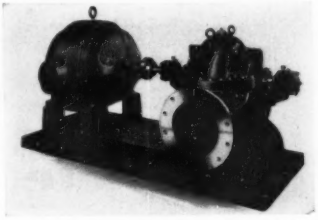

"Buffalo" Tips on Better Pumping

REGULAR PREVENTIVE MAINTENANCE

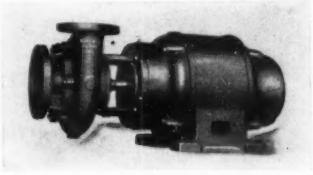
Keeps Your Pumps Performing!



FULL BALL BEARING "Buffalo" Pump for hard service. Its bearings are oversize, capable of handling speeds up to 5000 rpm.



"BUFFALO" TYPE "SL" Double Suction Pumps are among the most popular for humidifier and air washer service.



CLOSE-COUPLED for cramped quarters! The Type CCI. Pump is one of many models to suit specific needs.

● Even the best constructed pumps require regular servicing for efficient performance and long life.

The best way to insure the success of a preventive maintenance program is to set up a regular schedule for servicing and inspection. A qualified engineer who knows pumps and lubricants should be the one to set up this schedule.

The schedule would call for at least four inspections of each pump annually, to check on bearings, shaft alignment, packing, impeller and lubrication. The inspector makes a report of any conditions which need correcting —conditions requiring servicing, to the operating group; conditions requiring repairs, to the maintenance group. (Often, these reports prevent minor conditions from developing into major troubles).

The schedule for lubrication, as well as any operating instructions, should be posted plainly on or near each pump.

This is another in a series of messages by Buffalo Pumps, Inc. in the interest of conserving materials and industrial equipment.

"Buffalo" BUFFALO PUMPS INC.
173 MORTIMER STREET BUFFALO, NEW YORK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

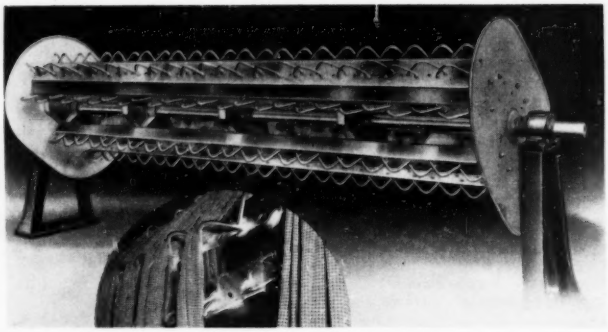
A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

cited for the bobbin.

Presently available for No. 5 head size in 7⅜" and 8" lengths, with or without ferrule.

*American Paper Tube Co., Woonsocket, R. I.*

For additional data, request item G-902, using business reply card on page 200.



**Hunter "No/Lap Reel" for any dyebeck. Inset shows how it operates.**

## Special Dye Reel Needs No Covering

A "No/Lap Reel" now incorporated in the Hunter Model A dyebeck entirely eliminates the need of providing traction by covering the dye reel with cloth, canvas or rubber, the manufacturer claims. Savings in material, labor, and work scheduling are advantages said to be derived.

The feature which is reported to make the "No/Lap Reel" unique is the arrangement of inverted V-bars which gives a gentle but firm gripping action to each strand of cloth in the machine. Two rows of these bars are made adjustable so that goods can be run continuously in one strand during the dyeing operation. The bars can be raised or lowered to give proper tension to each strand of cloth. On the ends of the reel, they can be further adjusted to take care of the cloth passing from one end of the reel to the other, as in spiraling.

The "No/Lap" reel may be ordered separately for installation in any make dyebeck.

*James Hunter Machine Co., North Adams, Mass.*

For additional data, request item G-114, using business reply card on page 200.

## Automatic Measuring Device for Half, Quarter Folders

Where there are materials to be measured into halves, fourths, etc., for marking, cutting, or folding, an electro-mechanical device is now available which does the job automatically.

According to the manufacturer, the device is now being used on folding machines which automatically measure and quarter fold sheets of various lengths.

Other textile applications are visualized.

*American Machine and Metals, Inc., East Moline, Ill.*

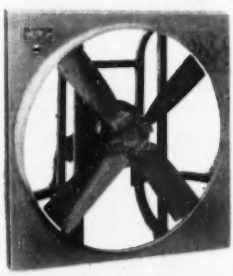
For additional data, request item 903, using business reply card on page 200.

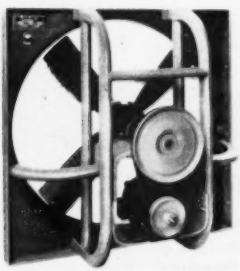
## Heavy Duty Exhaust and Pressure Fans

Two new heavy duty exhaust and pressure fans are designed for industrial applications, duct work, filtering systems, etc., where large volumes of air are needed under static pressure.

Type PLF is a direct drive fan equipped with non-overloading, cast aluminum airfoil type propellers. Ball bearing motor is totally enclosed. Available in sizes from 16" to 48"

**Chelsea fans: Type PLF above; Type PLBD below.**






HOW America out-produces the world

*Logan Roller Conveyors facilitate mass packing and shipping operations which are an integral part of this cotton mill set-up.*

2

American industry—"Originated the mass production idea and constantly improves it."

"Make 'em by the million," is a purely American expression, which in itself suggests huge economies and efficiencies.
Mass textile plant procedure includes the use of new spinning and weaving equipment, improved packing line methods, skills developed through repetitive operations. All these are contributing factors in the cost-cutting mass production idea.
And handling equipment, like Logan Conveyors, is recognized as indispensable to mass textile operations. Through every productive (and warehousing) phase, Logan equipment speeds output, takes the strain off human shoulders, aids these American mass production processes. Write today for literature, or for engineer to call.

Logan Conveyors

LOGAN CO., 206 CABEL ST., LOUISVILLE, KY.

NEW Equipment AND MATERIALS

and air deliveries from 2,900 to 37,000 cfm.

Type PLBD is a belt driven fan and also equipped with non-overloading cast aluminum airfoil type propellers. Ball bearing motor is totally enclosed. Available in sizes from 24" to 48" and air deliveries from 5,000 to 28,000 cfm.

*Chelsea Fan & Blower Co., Inc., Plainfield, N. J.*

For additional data, request item 909, using business reply card on page 200.

### Open Channel Flow Meter

Series 500 open channel flow meters for measuring, recording, and controlling the flow of water, sewage, industrial plant effluent, and other liquids, are manufactured in two general types: mechanical and electric. Flow is determined by measuring the head of liquid flowing through a flume or over a weir in the flow channel. This measurement of head is interpreted by a cam, cut to the equation of the weir or flume, into terms of flow, which is then recorded on a uniform chart and integrated if desired.

*The Bristol Co., Waterbury 20, Conn. (G-904).*

### New Loom Accessories by Livermore

In the upper photo is a new drive rod arm which, according to the manufacturer, is designed so that it applies pressure to both sides of the loom sword and cannot become loose.

When the belt is tightened, a wedge-shaped washer slides along the face of the arm until it contacts one edge of the sword and applies pressure between the hook on the arm and hook on the washer, thus clamping opposite sides of the sword.

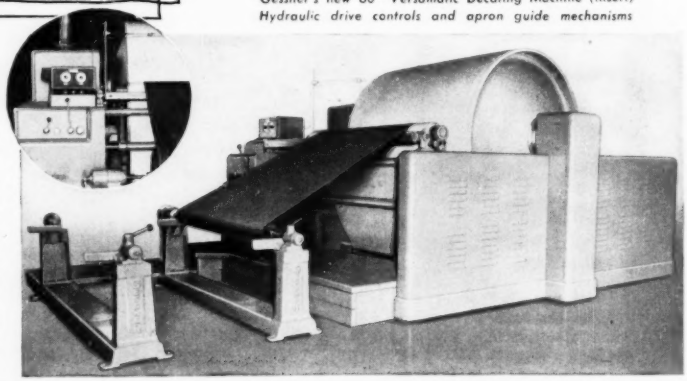
Another loom accessory recently developed is a rubber (picker stick) floor spring (lower photo) which is said to eliminate breakage. The spring is made of special rubber that is not affected by oil and is designed so that the rubber strip can be easily replaced if necessary. Considerably longer life than that of steel wire type floor springs is claimed for the item.

*H. F. Livermore Corp., Boston 34, Mass.*

For additional data, request item G-108, using business reply card on page 200.


# Combine Decating Quality and Quantity ... with Gessner's Versatile new 60" Versamatic

Gessner's new 60" Versamatic Decating Machine (insert) Hydraulic drive controls and apron guide mechanisms



Gessner's new 60" Versamatic receives cloth for semi-decating from batch rolls or folds — then delivers it either on batch rolls or in folds. High operating speeds are possible because of the automatic apron tension control and automatic apron guider. These features together with infinite speed variation and controlled pressure roll are the result of the ingenious hydraulic drive. The 60" Versamatic will decate 8 pieces or more of woolens or worsteds, or upwards of 1000 yds. of rayon and other synthetics per loading.

## DAVID GESSNER CO., Worcester, Mass.

Canadian Representative: W. J. Westaway, Montreal, Quebec; Hamilton, Ont.

**Gessner Improved Cloth Finishing Machines maintain a standard of performance to meet the exact requirements of your cloth finishing.**

## Quality Control Society Plans to Activate Textile Division

W. S. Smith, chairman of the Textile Technical Committee, American Society for Quality Control, has announced that the national society approved the intention to form industry-wide divisions. This action took place at the annual board of directors meeting of the American Society for Quality Control in Syracuse, N. Y., May 24, president Wade Weaver presiding. The first such division will be the Textile Division which is expected to be formally activated in August.

This is the culmination of efforts of a steering committee for the past few months under the chairmanship of John Reynolds, Celanese Corp. of America, Rome, Ga. The other members of this steering committee, which made this action of the board of directors possible, were R. R. Jones, Bigelow-Sanford Carpet Co., Amsterdam, N. Y.; E. G. Field, Field and Associates, Atlanta, Ga.; R. A. Hefner, Georgia Institute of Technology, Atlanta, Ga.; G. M. Hailes, Avondale Mills, Sylacauga, Ala.; D. S. Hamby, School of Textiles, N. C. State College, Raleigh, N. C.; and E. S. Rudnick, Wamsutta Mills, New Bedford, Mass.

It is expected that this division will hold national and regional meetings on a periodic basis to further the science of statistical quality control among textile members. Over 50 petitioners, all A.S.Q.C. members from throughout the U. S. and Canadian textile industry, had been recorded on May 22 as favoring the formation of this division. A special textile supplement to the Industrial Quality Control magazine will be issued early in August.

Another two-day Textile Quality Control Conference will be held in Clemson, S. C., August 22-23, sponsored by the Textile Technical Committee of the American Society for Quality Control. A similar conference last year found about 150 in attendance. At this year's meeting, it is expected that the Textile Technical Committee will be dissolved and the newly formed division take over its duties.

Election of division officers is to be held prior to the August meeting by mail ballot. All those A.S.Q.C. members who have signified their intention of being affiliated with this Textile Division will be eligible to vote. Communications regarding this should be addressed to E. G. Field, Field and Associates, 1101 Hurt Building, Atlanta 3, Ga.

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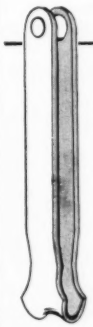
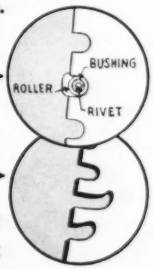
# DOBBY LOOPS

**That's good news for would-be users previously disappointed by our inability to make deliveries of this smallest big money saver in textiles. We've expanded production and caught up on back orders. We can now promise prompt shipment from stock either now or in the future.**



***It's the Roller that Virtually Eliminates Jack Lever Wear***

***No More Wear Like This***




**The roller and bearing on the Dodenhoff Dobby Loop eliminate wear by eliminating friction and giving you a smooth rolling harness. That means a double saving — both in replacement cost and shut-down time. You'll agree with users that here is one of the greatest investments you can make.**

W. D. DODENHOFF COMPANY
INCORPORATED
GREENVILLE, SOUTH CAROLINA

**Technologists Ask About X-51 Acrylic Fiber**
(*Continued from page* 145)

hose. The hose were subjected to home washing; the slacks to dry cleaning.

***Q. Have you made any experiments with crepe twist and what has been the experience?***

A. None yet.

***Q. Any price set on staple or filament?***

A. Not as yet. The fiber is not being offered for general sale as yet.

***Q. Please comment on ease of ironing as compared to existing fibers on market.***

A. Use a low iron temperature (acetate or rayon temperature). Crease and wrinkle resistant character is common with other acrylic fibers.

***Q. What sizes will the fiber be available in?***

A. Filament: 150/90, 100/60, 75/45; Staple: 3.0 deiner, 1.5 denier.

***Q. What are soiling characteristics of the fiber?***

A. Laboratory tests indicate that X-51 doesn't pick up soil.

***Q. What about the apparent "density" of the fiber?***

A. X-51 is much bulkier than you would expect to find for the denier used. The tendency is to overconstruct because of this.

***Q. Is the crimp in staple permanent or set as in nylon?***

A. The crimp in X-51 is stabilized so that it will persist throughout processing to a degree which will permit carding, drawing, and bulking of yarn.

***Q. Where does X-51 stand in relation to other synthetics with reference to abrasion resistance?***

A. About the same as other acrylic fibers. Although not much information on this property has been developed, it appears that wear of socks is normal with the construction involved.

***Q. Is there any advantage to the round cross-section as compared to the dog-bone?***

A. We don't know yet. The round cross-section is a peculiarity of the manufacturing process.

***Q. Can coarser deniers be made up, say 10 and 20?***

A. They have been produced experimentally.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Textile Industries

Volume 116 Number 7
JULY, 1952

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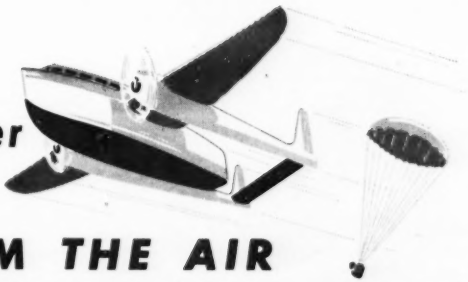
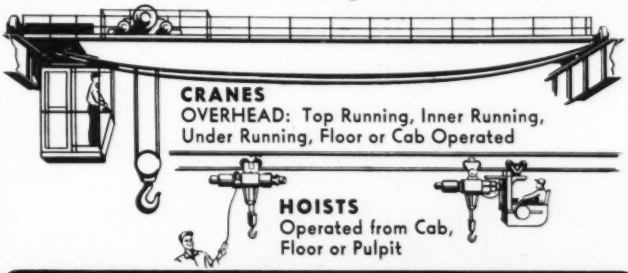


**FROM THE AIR**

● Want to spot loads more accurately — stack them higher? Then put this Shepard Niles Crane to work! From his vantage point, the operator can see where loads should go, then deliver them there directly.

● Little wonder so many plants use through-the-air handling — it's so fast, so easy, so economical. But which crane is best for your plant? The Shepard Niles representative is qualified to answer this question because he specializes in through-the-air handling. He knows the importance of installing the right equipment from the start. Write for Bulletin 180 today — and ask to have a representative stop by your office.

***Specialists in loads through-the-air since 1903***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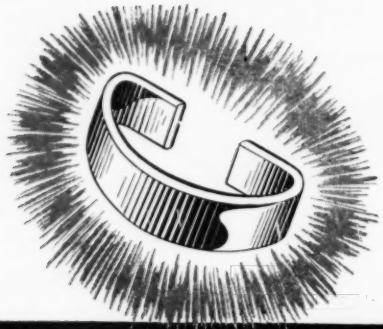

# DARY
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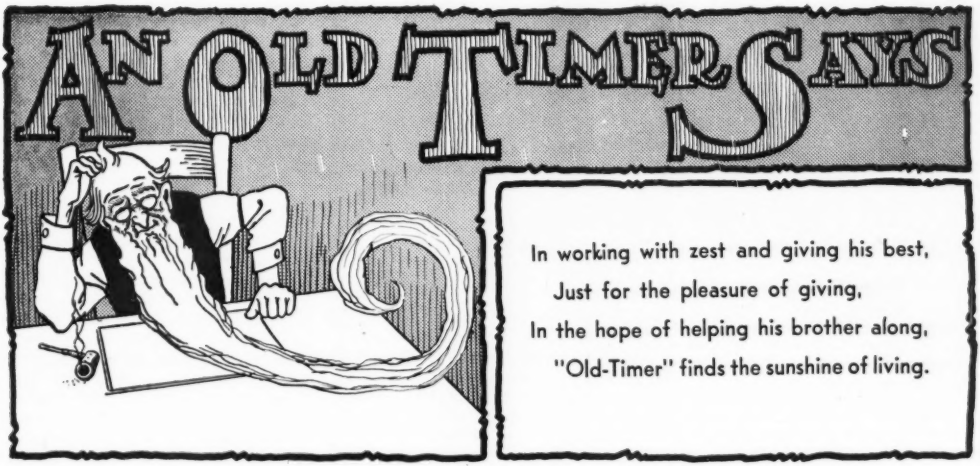
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

# A Test of Yesteryear

IN 1931 we made a test to find the difference, if any, in the breaking strength of 30s warp yarn spun with regular warp traverse and combination warp and filling traverse.

We made 406 weighings, sizing, and breakings. The yarn used in the tests was spooled yarns instead of making the testings from yarns direct from spinning frames. Results: Total pounds of 406 breakings of regular warp traverse was 21,486 lb, while total breaking of 406 tests of yarn spun using combination warp and filling traverse was 21,894—or 408 lbs in favor of the combination traverse. This was one pound plus per sizing.

Then we selected 153 breakings of the exact same weight yarns tested on the same days and found that 153 breakings of combination warp and filling traverse totaled 8250 lb. The 153 breakings from the regular traverse totaled 8050 lb, or 1.3 lb per sizing.

We also found we had less tailings at the B-C high speed spooler with the combination warp and filling traverse.

As this test was made 20 years ago on American one inch cotton, we are wondering if any mills are making similar tests today.

In those days most mills making 30s warp yarns used a finisher picker with a doubling of 4; card draft about 110, making a 48-grain sliver—two processes of drawing, ending with a 55-grain sliver; slubber draft 4.88—1.15 twist per inch delivering 135 grains in 12 yards.

Intermediate draft 5.67, twist 1.9, delivering 47.6 grains in 12 yards; speeder draft 5.41, twist 3.4, delivering 17.6 grains for 12 yards; spinning draft 10.6 delivering 33.3 grains in 12 yards. Drafts were figured by weight of product instead of draft gears. 576 doublings to make 30s warp yarn. Sounds ridiculous to you overseers of carding and spinning, doesn't it?

Well, your fewer doublings today should give you a much stronger yarn from American one inch cotton. Does it? And how much more even are your 30s yarns today with your fewer doublings?

---

### What is Brain Food?

Are some foods better brain foods than others? No!

Of course, every person should have a well balanced diet of proteins, fats, vitamins, and minerals. But real brain foods are thoughts—ideas resulting from a trained imagination.

All progress is a result of imagination. For proof that imagination can be trained, refer to the numerous OLD-TIMER articles on imagination which have appeared on this page.

If you wish to put some real knowledge into your brain, it will pay you handsomely to re-read those articles. OLD-TIMER spent more than two years of intensive study to prepare those articles.

# Personal NOTES
## ABOUT MEN YOU KNOW

Delta Kappa Phi Fraternity of America, Inc., said to be the oldest textile fraternity in the United States, elected new officers at its recent convention at the Philadelphia Textile Institute. **A. Ward France** of the Institute was named supreme consul; **Henry A. Rutherford** of N. C. State College, supreme pro-consul; **Clifford M. Gilpin, Jr.,** Downs Carpet Co., supreme anatator; and **Stanley A. Pikalow, Jr.,** Beltex Mills, supreme custodian.

**George E. Fogle, Jr.,** was recently named general manager of Lowell Bleachery, and **Ralph Dorsey** was made assistant. **A. T. Henninger, Jr.,** former manager of the New York office, was named vice-president in charge of sales.

**Paul Gaffney** was recently promoted from assistant superintendent at Orr Mills to general superintendent of weaving at Orr and the Limestone Mills at Gaffney, S. C. **Henry L. Buchanan,** formerly superintendent of Oconee Mills, is now head of the industrial engineering department of the Lowenstein Mills.

**Burnet Valentine** has succeeded Robert Westaway, retired, as president of A. D. Juilliard & Co., Inc. Others elected were: **Robert Westaway, Jr.,** vice-president; **John S. Thompson,** vice-president; **Frank Conklin,** secretary; **Wesley Lang,** comptroller; and **F. J. McKenna,** treasurer.

West Point Manufacturing Co. has announced the election of **T. Scott Avary** as vice-president in charge of finance. He also was elected treasurer of Columbus Manufacturing Co., Dixie Mills, Inc., and Equinox Mill, subsidiaries of West Point. **Elwyn G. Preston, Jr.,** former treasurer of these mills, will continue as treasurer of West Point. **Joseph L. Lanier,** president at West Point, has been elected chairman of the board of Wellington Sears Co., selling agents. **Willfred W. Lufkin, Jr.,** was elected vice-president and **T. Scott Avary** vice-president in charge of finance.

**R. Paul Clark** has retired from active duty as agent of the Sauquoit plant of Standard-Coosa-Thatcher Co.

At the recent meeting of the New York section of American Association of Textile Chemists and Colorists, **Weldon G. Helmus,** Fairlawn Finishing Co., was chosen chairman to succeed Paul J. Luck of American Cyanamid Co. **John H. Hennessey** of General Dyestuff Corp. was named vice-chairman; **George A. Jonic** of Calco Chemical, treasurer; and **James J. Marshall** of American Aniline Products, Inc., counsellor.

**Richard F. Eshleman,** formerly with Hess-Goldsmith, has joined Benwood Corp. and will be responsible for manufacturing and plant operation.

**Charles F. H. Johnson, Jr.,** has been elected president of Botany Mills, Inc., to succeed his late father, Colonel Charles F. H. Johnson. **Harry C. Templeton** was elected executive vice-president and general manager.

**Dean M. Lewis,** Colonial Piece Dye Works, Inc., was recently reelected president of the Silk & Rayon Printers & Dyers Association of America.

Fieldcrest Mills have announced the promotion of **Arthur L. Jackson** to assistant superintendent of the Rayon Mill.

**Werner B. Hug** has been made head of the fabric development and sales service division of Frank Ix & Sons. He was previously with Burlington Mills Corp. **Alexander F. Ix,** president of the firm, was recently reelected president of the National Federation of Textiles, Inc.

**George Taylor** has been made superintendent of Oconee Mills, Westminster, S. C., succeeding T. H. Wood, resigned. Mr. Taylor was previously with Riegel Textile Corp.

**George H. Jackson,** formerly vice-president, has been elected president of Powdrell & Alexander, Inc. He


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succeeds Brainard T. Webb, resigned.

At the annual banquet of Theta chapter of Phi Psi, honorary textile fraternity, at Georgia Institute of Technology, **Donald Harvey** of Pepperell Manufacturing Co., and **Julius J. Scott** of Scottdale Mills and Georgia Duck & Cordage Co., were made honorary members.

**Horace T. Greenwood,** head of the Globe Dye Works and retiring president of the Master Dyers Association of Philadelphia, was honored at a testimonial dinner given by the association, of which Mr. Greenwood had been president for 20 years.

**William P. Saunders** has been elected president of Robbins Mills, succeeding Edward A. Werner, resigned. Mr. Werner will continue to be associated with the firm in an advisory capacity.

**Marshall S. Delavan** has been appointed controller, and **Paul E. Casey,** assistant secretary, of Alexander Smith, Inc. Mr. Delavan was formerly with Burlington Mills Corp. Mr. Casey joined Alexander Smith eleven years ago as an accountant, and for the past four years has been the firm's chief tax accountant.

Honorary degrees from the University of South Carolina were recently conferred on **James C. Self,** president of Greenwood Mills, and **Walter S. Carpenter, Jr.,** board chairman of E. I. du Pont de Nemours & Co., Inc. Mr. Self received the degree of doctor of letters of humanity, and the doctor of science degree was given Mr. Carpenter.

The Charlotte, N. C., chapter of the Society for the Advancement of Management has elected new officers as follows: **Emmett F. Williams,** Duplan Corp., Lincolnton Division, president; **Thomas N. Ingram,** American Cotton Manufacturers Institute, first vice-president; **Herbert A. Lynch,** management consultant, second vice-president; **Paul Marion,**


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"These ROTARY UNIONS have performed better than any other steam joint we have ever used and we have never even touched them for adjusting in all this time. We have since installed them on our old equipment and they are doing a wonderful job. They are such money savers on maintenance and in eliminating down-time that it is going to be ROTARY UNIONS 100% for us from now on."

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*Superintendent, Falls Company, Norwich, Conn.

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## Personal NOTES
ABOUT MEN YOU KNOW

third vice-president; **E. S. Hamilton,** American Trust Co., secretary; and **George D. Powell,** J. B. Ivey & Co., treasurer.

**Herman A. Dickert,** director of the A. French Textile School at the Georgia Institute of Technology, was recently named president of the National Council of Textile School Deans. The council is composed of representatives from all of the textile schools in the country.

**Roy C. Humphrey,** formerly president, was elected chairman of the board of Munsingwear, Inc. He succeeds **Harry C. Piper,** who, feeling that all corporate officers should take an active part in management, requested that he not be reelected. **George D. McConnell** was elected president.

**Robert Schantz** has been appointed superintendent of James Lees and Sons Co.'s new tufted carpet department at Bridgeport, Pa. **Robert Handly,** worsted superintendent, has been named assistant manager at the plant and will continue to function as worsted superintendent. At the Glasgow, Va., plant, **Wert Faulkner** has been made superintendent of the Axminster department with **Leon Hoyt** as assistant. **Ed Crothers** has been appointed assistant superintendent of the wilton and velvet department.

**E. A. Bentley,** with the company since 1938, has been named assistant to the president of Swift Manufacturing Co. Named to succeed Mr. Bentley as plant superintendent is

**Mr. Bentley**

**W. F. Siegler. A. E. Owen, Jr.,** formerly overseer of winding, is now assistant superintendent.

**Albert G. Myers, Jr.** was recently elected assistant vice-president of Textiles Inc. He is also secretary and purchasing agent of Threads-Inc.

Tubtex Fabrics Corp. has announced the election of **Robert Duxbury** as vice-president in charge of production. He has been chief of the converting department.

**Jacob W. Schwab,** president of United Merchants and Manufacturers, Inc., was elected one of three new directors of the Commerce and Industry Association of New York, Inc.

**Alfred C. Werner** has resigned as assistant to the president of Beaunit Mills, Inc.

**Robert R. West** has succeeded **Richard W. Sulloway** as president of Sulloway Hosiery Mills, Franklin, N. H. Mr. Sulloway will continue as treasurer, and Mr. West has the additional position of general manager, following the resignation of Roderick Wogan.

**William E. Jennings** succeeds Frank Aiken, resigned, as general manager of the Verney Corp. plant at Manchester, N. H. He was previously with Westover Mills.

### Obituaries

**Benjamin M. May,** retired general manager of E. I. du Pont de Nemours & Co., on May 5 at the age of 67.

**William Horowitz,** 64, president of American Dyeing Corp. and Bellefont Dyeing Corp.

**E. Stanley Bowers, Sr.,** 71, vice-president and treasurer of Continental Mills, on May 11.

**C. V. Jones,** 55, superintendent of Saco-Lowell shops at Sanford, N. C.

**Sylvan I. Stroock,** 65, chairman of the board of the Stroock Textile Enterprises, on May 17.

**Col. Charles F. H. Johnson,** 71, president of Botany Mills, on May 9.

**Dr. Eugene Theimer,** research chemist for Standard Chemical Products, Inc., on May 5.


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GRANT BUILDING, PITTSBURGH, PA.
30 CAMDEN ROAD, ATLANTA, GA.

## SUPPLIERS News

WHAT THEY ARE DOING

A project has been initiated at the Georgia Tech Engineering experiment Station by **Southern Latex Corp.** to provide research on latex products, particularly those used by the textile, cotton rug and carpet, and paper industries.

The valve division of **Minneapolis-Honeywell Regulator Co** has established a research center in Philadelphia to support an extensive development program in industrial valves. An important phase of the activity, according to S. A. Keller, general manager, will be the determination of the suitability of substitute valve materials. In the industrial division of the firm, John A. Robinson has been named sales manager of the eastern and mid-Atlantic regions. Joseph J. Matulis has been made industrial manager for the midwest section, and C. G. Behnke has been promoted to industrial manager of the Chicago branch office.

J. F. Hutchinson, previously with Pacific Mills, has been added to the engineering staff of **Barnes Textile Associates, Inc.'s** southern office

A tract of land of 64 acres in Roseland, N. J., is being purchased by **Kidde Manufacturing Co., Inc.,** for the eventual construction of a modern one-story plant.

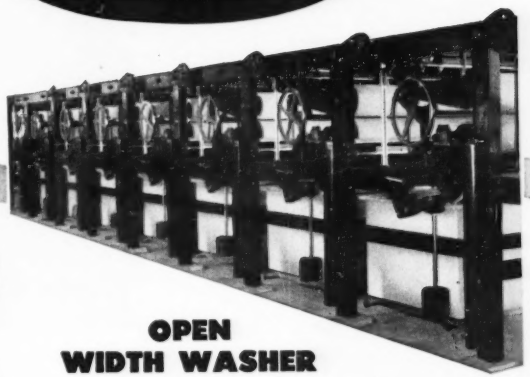
Herbert E. Kresse, with **Kearny Manufacturing Co., Inc.,** from 1928 to 1942, has rejoined the firm as first vice-president and general manager.

The manufacturing plant and offices of **Carbomatic Corp.** have been moved from Long Island City to 70 Bennington Ave., Freeport, N. Y.

A new textile division has been established by **Celanese Corp. of America** for operating all the textile activities of the company. K C. Loughlin, vice-president, has been appointed general sales manager. Also, a market development department of the textile division has been created to promote the use of the company's fibers, with A. S. Dempewolff as manager.

**Borden Co.** has opened a chemical plant at Demopolis, Ala., to manufacture formaldehyde, synthetic res-


INVESTIGATE
Tower
TEXTILE EQUIPMENT



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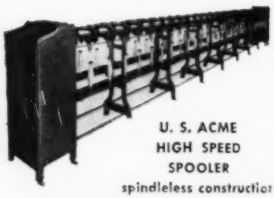
Your investigation will reveal — Tower Textile Engineers are good men to know particularly if you are cost conscious. Our skilled consultants will be pleased to confer with you on the design and installation of the finest in textile equipment, to meet your most exacting operational requirements.

*Write for free booklet on Tower Textile Equipment*

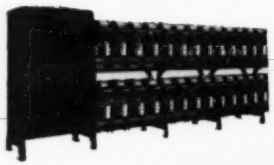
**IRA L. GRIFFIN & SON**
Charlotte 1, North Carolina
Southern Representative

Tower Iron Works
*Established 1835*
**50 BORDEN STREET, PROVIDENCE 3, RHODE ISLAND**

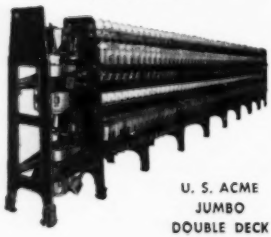
U.S. ACME
MODERN THROWING EQUIPMENT



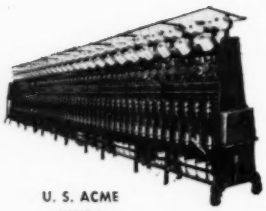
U. S. ACME
HIGH SPEED
SPOOLER
spindleless construction



U. S. ACME
FACE DRIVE TWISTER
the high speed headless
package twister



U. S. ACME
JUMBO
DOUBLE DECK
TWISTER



U. S. ACME
JUMBO
DOUBLER TWISTER

*SERVICE AT THE TIME OF PURCHASE... SERVICE OVER THE YEARS!*

write for descriptive bulletins

**U. S. TEXTILE MACHINE COMPANY**
SCRANTON 8, PENNA.

## SUPPLIERS News
WHAT THEY ARE DOING

ins, and hexamethylenetetramine. Its output will be for use by woodworking, furniture-making, textile, paper, plastics, and foundry industries in the area.

**Draper Corp.** and its president, T. H. West, were recently honored at a luncheon by the Newcomen Society of North America. James H. Richardson, formerly with Price Waterhouse and Co., has been named assistant treasurer at Draper.

Benjamin Gudzinowicz, previously with Monsanto Chemical Co., has

## *Anderson, Clayton Expands Laboratory Facilities*

Starting out in 1949 in one room located adjacent to the classing room at the Long Reach plant in Houston, Texas, Anderson, Clayton & Co.'s Fiber Laboratory has now been expanded to occupy about three quarters of a two-story building approximately 50′ x 100′, a spinning laboratory has been added, and weaving and finishing equipment is being installed.

Fiber properties of different types of cotton are determined. Samples from current production are tested to determine the potential value of the fibers. The data, in turn, aid spinners in selecting cottons for their specific requirements.

According to Anderson, Clayton, as the mills become more familiar with the performance of various types of cotton, the better they will be able to fit the cotton to their exact requirements. The cotton merchant, knowing these exact specifications, will better be able to supply the right cotton.

Increased knowledge of cotton fibers means better cotton fabrics, more efficient mill operations, and a stronger position for cotton in a highly competitive market, the firm claims.

Personnel at the Houston laboratory, which is under the supervision of Dr. Earl E. Berkley, a former U. S. D. A. fiber specialist, are made up of 23 scientists, technicians, etc.

Four branch laboratories are being established: fineness and strength tests will be made at Memphis and Atlanta; fineness tests will be made at Los Angeles and New Orleans.

Shown in the photo above are Houston laboratory division heads. Left to right are: Charles T. Marth, spinning laboratory; Edwin J. Jennings, research; and Samuel C. Mayne, testing.

joined the staff of **Dewey and Almy Chemical Co.**, and will have charge of the control laboratories group. Malcolm Hecht, Jr., has been appointed foreman in the new plasticizer area at Acton, Mass. John G. Broughton, Jr., will sell copolymer latices to the textile, paint, and paper industries. He was previously with Shell Chemical Corp.

Fred J. Ebeling has been made general sales manager of the **Dodge**

**Mr. Ebeling**

**Manufacturing Corp.**, Mishawaka, Ind.

Donald C. Oskin has been named assistant manager of sales for the Westvaco Chemical Division of **Food Machinery and Chemical Corp.** He was previously director of district sales.

Will Cain, previously with the firm's Houston, Tex., staff, has been appointed New Orleans sales representative for the **A. O. Smith Corp.** Mr. Cain will handle process equipment, line pipe casing, industrial grating, and vertical turbine pumps.

**The International Nickel Co. of Canada, Ltd.**, has announced the election of Dr. Paul D. Merica as president, with Dr. John F. Thompson continuing as chairman of the board.

**Hillary Robinette, Jr.**, formerly research director of Amalgamated Chemical Corp., has opened his own offices in Ardmore, Pa., as chemical consultant to business and industry. He will continue as a consultant to Amalgamated on textile wet processing problems.

William L. Wearly has been elected general sales vice-president for **Joy Manufacturing Co.**, in charge of all sales in the United States, Canada, and Mexico.

**Diamond Alkali Co.** has announced that its unit for the manufacture of perchlorethylene, formerly planned for construction at Painesville, O., will instead be made a part of the expansion program at its Houston, Texas, plant.

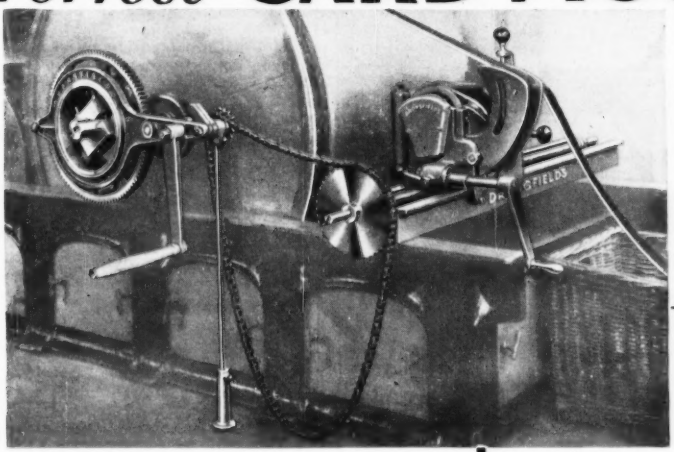
**American Cyanamid Co.** has announced the appointment of James M. McNamee as sales representative for the firm's industrial chemicals

**Mr. McNamee**

division in Georgia and Florida. Mr. McNamee will make his headquarters in Atlanta, Ga.

**United States Rubber Co.'s** textile division has established a yarn sales office at 819 Santee St., Los Angeles,


# *Perfect* CARD MOUNTING



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COTTON
WOOLLEN
WORSTED
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Card Mounting Machine Nº 220 with Double Purchase Jack *for* clothing Card Cylinders and Doffers

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## SUPPLIERS News
WHAT THEY ARE DOING

Calif. Hubert O. Fry has been appointed manager. Joseph B. Jackson succeeds Mr. Fry as manager of the Reading, Pa., sales office, and W. Joseph McCarty has been transferred to Gastonia, N. C.

George O. Linberg has been elected vice-president and New

**Mr. Linberg**

England sales manager of **Synthron, Inc.** Mr. Linberg previously was with Monsanto Chemical Co., and is active in the AATCC.

A reception and open house were held recently by **L. J. Wing Manufacturing Co.** for all employees, families, and friends. Presentation of service awards was made by H. S. Wheeler, president, who received one himself, having completed 50 years with the firm.

**General Dyestuff Corp.** has announced the election of S. H. Williams as a vice-president and also general sales manager for the firm. Succeeding Mr. Williams as manager of the Charlotte, N. C., office is C. C. Cayce.

**Taylor, Stiles & Co.** has set up a testing laboratory at Riegelsville, N. J., to which any one can bring or send sample materials for test cutting to any specified dimensions or fineness.

**The Howe Scale Co.** has promoted Fremont Fisher from Philadelphia to become manager of the firm's Chicago branch; Manual J. Kauffman takes over in Philadelphia; John R. Berry has been transferred to Denver; Charles J. Koch becomes New Orleans branch manager; and O. B. Phillips has been promoted to manager of the Seattle branch.

William B. Griffin, formerly with Kali Manufacturing Co., has joined **Dexter Chemical Corp.** as district

**Mr. Griffin**

representative. His territory will include Georgia, Alabama, and Tennessee.

The **United States Testing Co.** has added a psychometric laboratory to its testing service. Dr. Dean Foster is in charge.

Henry L. Dozier, formerly connected with Adelaide Mills, will represent **Karl H. Inderfurth** in the distribution of textile machinery and chemicals in Alabama and Georgia.

**General Latex and Chemical Corp.**, Cambridge, Mass., has opened a plant at Dalton, Ga., with Robert H. Elwell as general manager.

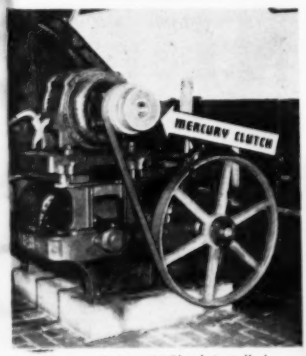
Harold Francis has been elected a vice-president and appointed general sales manager for the eastern division of **Corn Products Sales Co.**

Arthur P. Boller, secretary of S. C. Lawlor Co., was recently re-elected

**Mr. Boller**

to the presidency of the **Floor Machinery Manufacturers Assn.**

Tadayoshi Kitamura, former managing director of Asahi Chemical Industry Co., is the president of the **Asahi-Dow Limited**, recently formed associate of **Dow Chemical International Limited** and **The Asahi Chemical Industry Co.**, large Japanese chemical and textile manufacturer. Max Key, assistant production manager of Dow's saran depart-


*Mercury Automatic Clutch installed on a Textile Calender.*

***The Mercury Automatic Clutch is the perfect solution to prevailing power transmission problems on textile machinery.***

**4 REASONS WHY A MERCURY AUTOMATIC CLUTCH IS A GOOD INVESTMENT**

- ***INCREASED PRODUCTION . . .***
- ***UTILIZATION OF MAXIMUM MOTOR TORQUE . . .***
- ***SAVING OF MOTOR COST . . .***
- ***PROVEN DEPENDABILITY . . .***

Write today for a copy of Mercury Catalog TL-3

MERCURY CLUTCH DIVISION
**AUTOMATIC STEEL PRODUCTS, INC.**
CANTON 6, OHIO

ment, is vice-president. Dow Chemical has also announced that Dr. R. H. Boundy, in the plastics department since 1945, has been named to head the company's research activities. C. B. Branch will replace Dr. Boundy as manager of the plastics department.

A research fellowship has been established by **Emery Industries, Inc.,** in the graduate school of applied science at the University of Cincinnati. J. D. Fitzpatrick, with Emery

**Mr. Ekstrand**

since 1935, becomes the first fellow under the grant. Succeeding him as head of the chemical research department is Dr. Charles G. Goebel. The firm has also announced a program of territorial expansion. A. R. McDermott will assume responsibility for sales in Texas, Louisiana, Oklahoma, and Arkansas. N. F. Reinert goes to the Chicago office to assist D. R. Eagleson. F. L. Ekstrand, assigned to the Philadelphia office, will cover eastern Pennsylvania and Southern New Jersey.

Thirteen employees who had completed 25 years of service with **Nopco Chemical Co.** were recently presented with solid gold watches. At the same gathering, the 15-year club inducted sixteen new members.

**Standard-Coosa-Thatcher Co.** has opened a branch office and warehouse at 1427 North Broad St., Philadelphia 22, Pa., with Earle R. Dillmore as manager.

Victor C. Hassold has been made president of **Steel Heddle Manufacturing Co.,** succeeding John J. Kaufmann, Sr., now chairman of the board.

The fiber glass division of **Libbey-Owens-Ford Glass Co.** has purchased patent rights to the "Garan Finish" and acquired certain technical services of Dr. Robert Steinman, president of the Garan Chemical Corp. The Garan finish is a surface treatment applied to glass fibers.

## What the TEXTILE MILLS are doing

The Anderson, S. C., plant of **Abney Mills** has converted its steam boilers from coal to natural gas. The equipment is set to maintain an automatic pressure of 80 pounds on the boilers, and no attendant is needed.

The **W. A. Handley Manufacturing Co.,** Roanoke, Ala., recently held open house at its newly completed community center. The building contains a stage, ping pong tables, snack bar, television sets, etc., and play-

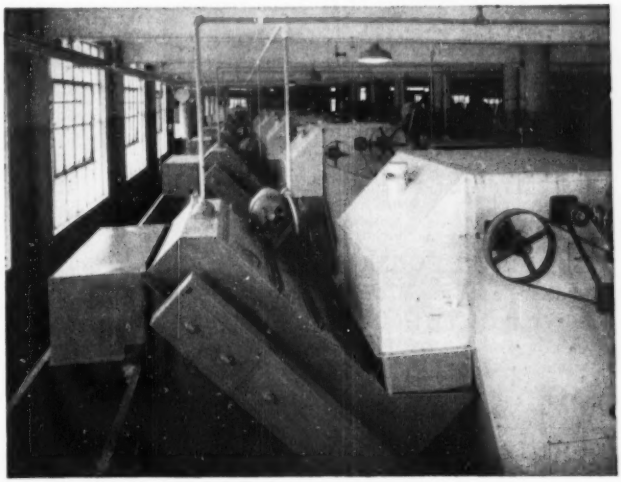

# THE "JUNIOR CLEANER"

(Pat. Pend.)

*Does a "Man-Size" Job!*

For use between hopper and conveyor.
Delivers to regular cleaning line.
Completely opens and pre-cleans small amount of cotton delivered to each hopper in battery, so that machines in regular cleaning lines do *more cleaning* with *less staple breakage.*
Requires 43" between hopper and conveyor table.

**PROVED BY TEST**



**Shown above is a complete installation of "JUNIOR CLEANERS" in opening room of an Alabama mill.**

*Manufactured by*

**GASTONIA TEXTILE MACHINERY CO.**

**GASTONIA, NORTH CAROLINA**

# DARNELL
## CASTERS & WHEELS

*MAXIMUM FLOOR PROTECTION*

**If you want maximum floor protection, economy and efficiency Demand Darnell Dependability...Made to give an extra long life of satisfactory service . . . . .**

SAVE EQUIPMENT
SAVE FLOORS
SAVE MONEY
and TIME

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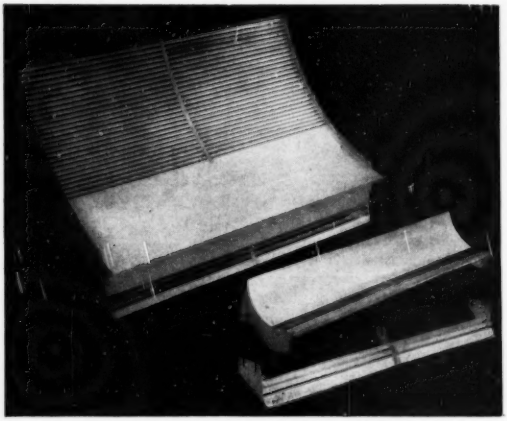
36 North Clinton, Chicago 6, Illinois



# TROUBLE STARTS

## *with ill-fitting screens*

Check your card screens now. You cannot produce top grade textile products without precision fitted screens. Even sliver never comes from worn screens.

Today, as never before, it is important to replace or repair equipment *before* it becomes trouble. Sims is equipped to repair your re-usable equipment or furnish you with replacement parts. Check your equipment now, then call Sims.

**REPLACEMENT PARTS**

1. Spinning Cylinders
2. Spinning Cylinder Heads and Arbors
3. Card Screens
4. Picker Screens

Get the Sims CHECK LIST habit—check your equipment against the stock replacement parts list at left. It's a money saving habit.

Sims
METAL WORKS
WEST POINT, GEORGIA

ground equipment is being set up outside for the small children.

**Wyandotte Worsted Co.** has plans under way for the replacement and modernization of its machinery.

**The Brenham (Tex.) Cotton Mill** held open house recently in honor of its 50th anniversary. Thousands of guests visited the plant, and a big barbecue highlighted the occasion.

All operations of **E-Z Mills, Inc.**, are being transferred to the Cartersville, Ga., mills, according to Sherman P. Haight, chairman of the board. The Bennington, Vt., plant has been closed and may be placed for sale.

**Benwood Corp.**, a tricot knitting firm, was recently formed with Alfred C. Werner as president and director. Offices are located at 24 West 40th Street, New York City. Mr. Werner recently resigned as assistant to the president of Beaunit Mills.

**The Chatham Manufacturing Co.**, Elkin, N. C., recently donated seven acres of land to the Elkin Elementary School for use as a playground.

**Boyd Lee Hosiery Mills, Inc.**, Hickory, N. C., has an expansion program under way which will provide 10,000 sq ft more floor space, according to C. W. Broome, vice-president.

The corporate name of **Cone Export and Commission Co., Inc.**, has been changed to **Cone Mills Inc.**, according to S. F. Dribben, president of the organization. The company is a wholly owned subsidiary of the Cone Mills Corp. of Greensboro, N. C.

A modernization program just completed at **Smitherman Cotton Mills, Inc.**, Troy, N. C., included the installation of 150 additional looms, 8000 more spindles, fluorescent strip lighting, new floors, and a new insulated roof.

**Dixie Mercerizing Co.** has acquired the outstanding capital stock of **Dalton (Ga.) Candlewick, Inc.**, and **Candlewick Yarn Co.**, its sales organization. Dalton Candlewick produces yarns for the tufted textile industry. C. Ralph Ewing was elected president and general manager of the two Dalton firms, and was also elected executive vice-president of Dixie Mercerizing.

For the fourteenth year since **Joanna Cotton Mills Co.** established a share-the-profits plan, employees of the firm received annual wage dividends. The payments, totaling $270,000, averaged $175 per person.

Lester Martin, president of **Consolidated Textile Corp.**, which operates mills in Lynchburg, Va., and Shelby, N. C., announced that the firm's **Windsor Print Works** plant at North Adams, Mass., would be moved to the South.

Two additions, one a three-story building, the other two-and-a-half, are being constructed at **Lanett (Ala.) Bleachery & Dye Works.**

## *What the* TEXTILE MILLS *are doing*

Arthur G. Ansart, Jr., is president of the **Hartford Roll Thread Co.**, Canton, Conn., chartered to manufacture cotton thread and kindred textile specialties.

An expansion program at the mill of **Danita Hosiery Manufacturing Co.**, Newark, Del., is being carried out for

we're looking for
TROUBLE!
Yes, and we've found it in a *lot* of places during the past fifteen years. That's why thousands of Moynos are pumping today in nearly every industry.
**Where materials are hard to move,** the *Moyno* knows no equal. Even non-pourable pastes and highly viscous slurries present no performance problems.
**When the trouble is high maintenance,** Moynos bring costs down. Gentle *progressing-cavity* action resists abrasives and chemicals—delivers positive pressure without pulsation or turbulence.
**If you have a problem,** look to Moynos. They work where *nothing else* will! And, if present pumps are giving you trouble, may we suggest prompt inquiry. Moynos self-prime, pass particles and solids—have no cylinders, pistons, or valves. We'll gladly send you free Moyno Bulletin T-30-I.
ROBBINS & MYERS, INC.
R&M MOYNO PROGRESSING-CAVITY PUMP
SPRINGFIELD 99, OHIO • BRANTFORD, ONTARIO

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## CARTER TRAVELERS

By every yardstick these "jewels of perfection" measure up to the highest quality standards. The absolute uniformity of weight, temper and shape of CARTER TRAVELERS is scientifically controlled by a modern metallurgical laboratory.

That means smooth running work, long trouble-free performance and less wear on expensive rings.

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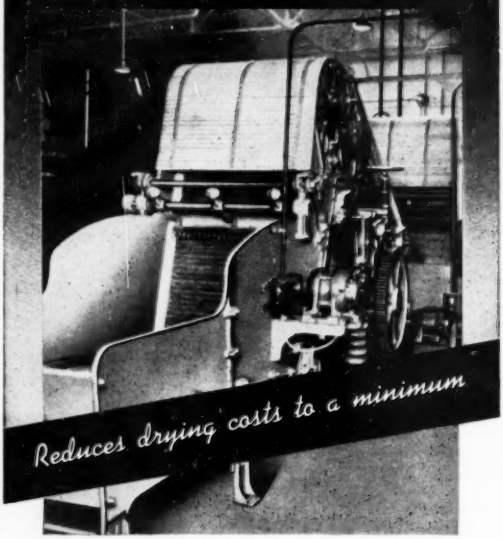
# Continuous-Automatic EXTRACTING




## TODAY'S MODERN EFFICIENT METHOD

SINCE 1852

The SARGENT "CONTINUOUS" EXTRACTING SYSTEM is saving thousands of dollars for many woolen, worsted and cotton mills. It employs an Automatic Feeder, the Extracting or Squeeze Roll Machine, and a Stock Dryer. This method of removing surplus dye, bleach, or scouring liquor from wool, staple rayon fibres, shoddy, mixed fibres, cotton and cotton linters, before drying, offers many distinct advantages, including:

- One-man operation, with capacity up to 2,500 pounds per hour.
- Machine made in five widths for varying plant requirements.
- Even and continuous flow of material into and through the dryer.
- Uniform drying results—savings in power—savings from continuous action—savings in labor, with ease of operation.

Write us for complete details.

*LARGEST MANUFACTURERS OF STOCK DRYING AND WOOL WASHING EQUIPMENT IN AMERICA*

**C. G. SARGENT'S SONS CORPORATION**
Graniteville, Massachusetts, U.S.A.

manufacture of lingerie in addition to regular hosiery production.

Construction has begun of a one-story addition to the plant of **Joanna Western Mills Co.**, Chicago, Ill., which will cost approximately $300,000.

**Felt Products Co.**, Chicago, Ill., has plans for construction of a new plant in Skokie, Ill. It is reported that an expenditure of approximately $1,000,000 will be made.

Jacob Goldfarb is president of the recently organized **Delmar Textile Corp.**, 42 Ruth St., New Bedford, Mass.

**Boston Textile Finishing Corp.**, South Weymouth, Mass., has been incorporated to take over and succeed to the company of the same name. William N. Gibson is president.

**R. W. Bates Piece Dye Works**, Garnersville, N. Y., are being purchased by **Textron Inc.** and will be operated for dyeing and finishing of rayons and mixtures.

**Linen Thread Co.** has closed its Dunbarton Mill at Greenwich, N. Y., and production heretofore carried out there will be distributed among other mills of the company.

Arrangements have been made for unification and concentration of management of Paterson Textile Printers, Inc., Grant Fabrics Finishing Corp., National Textile Printers, Inc., Fawcett Mills, and Star Ray Mills, controlled by A. M. Perlman, president, **A. M. Perlman, Inc.**, 1412 Broadway, N. Y. Headquarters of all plants are being removed to New York, and an expansion program carried out at the different mills.

**Geb & Souhan Yarn Co.** is the new name for Geb & Garvan Yarn Co., Inc., Seneca Falls, N. Y. F. J. Souhan is president.

**American Yarn & Processing Co.** has arranged for a merger with **Efird Manufacturing Co.**, Albemarle, N. C., the consolidated company to be known as **American & Efird Mills, Inc.** All mills will be continued in operation as heretofore, it is stated.

A finishing department for men's wear worsteds will be installed by **Collins & Aikman Corp.** in its Plant J at Bristol, R. I., according to Morris Einstein, plant manager. The firm has acquired Stead & Miller Co., Concord, N. C., upholstery fabrics, and will operate as a division of its organization.

**Gotham Hosiery Co.** has taken over a two-story building in Reading, Pa., and will equip for manufacture of nylon lingerie.

**Fine-Knit Hosiery Mills, Inc.**, has been incorporated to take over mill of the same name, recently dissolved. Felix Klinger is vice-president of the new organization, located at 408 North 12th St., Reading, Pa.

**Weldon Mills, Inc.**, Pawtucket, R. I., have plans for an expansion program.

**Greenhalgh Mills, Inc.**, Pawtucket, R. I., have a one-story addition to the mill under construction.

**Princeton Worsted Mills, Inc.**, Trenton, N. J., are planning a new branch mill at Kingstree, S. C., to be equipped for manufacture of "Dacron." The cost is said to be approximately $1,100,000.

**Henry Kline Knitting Co.**, Allentown, Pa., was recently organized for the manufacture of polo shirts and sweaters.

Employees of the Dunean Mills Division of **J. P. Stevens & Co., Inc.**, recently reached the million man hours mark for safe operations.

## What the TEXTILE MILLS are doing

A textile screen printing plant at New Bedford, Mass., will be operated by the recently organized **Quissett Screen Printing Co.** Malcolm M. Donohue, 74 Egmont St., Brookline, Mass., is president.

**National Textile Printers, Inc.**, and **Grant Fabrics Finishing Co.** have been granted licenses by Joseph Bancroft & Sons Co. for production of lustrous effects as well as textured surface and pattern effects, under Bancroft patents.

Ignatz Horowitz, 1069 Ocean Ave., New York, N. Y., is representative for the recently organized **Modelia Vienna Knitting Co.**

**Burlington Mills Corp.** has concluded arrangements for the purchase of **National Mallison Fabrics Corp.**, with mill at Buena Vista, Va. Burl-

for your nylons—

**Smoother production, easier selling with**

**LAUREL NYLON HOSIERY FINISHES**

Assure you better lubrication and increased elasticity. Yield softer, more beautiful hosiery with greater freedom from snags and wrinkles. Laurel Finishes improve your manufacturing and selling *and* profit position. Let our Technicians arrange a test for you. Write today.

Laurel Coning Oil #443•Laurel Nynit C•Laurel Scouring Compounds•

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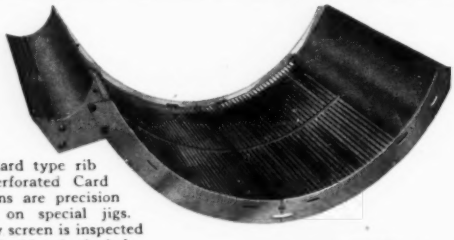
*Wm. H. Bertolet's Sons*
**ESTABLISHED 1909**

# MORE PRODUCTION AT LOWER COSTS

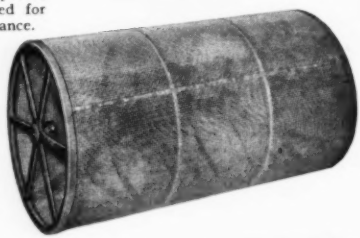
## with GASTONIA TEXTILE

### SHEET METAL PARTS

The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

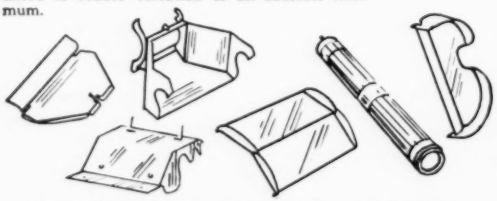


Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.



Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.

New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.



*Years of practical experience—the finest of raw materials—and precision machinery in the hands of skilled workmen go into every product.*

**GASTONIA TEXTILE SHEET METAL WORKS, INC.**
**GASTONIA, NORTH CAROLINA**

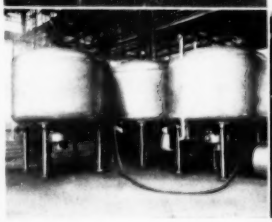
**A SHEET METAL WORKS SERVING TEXTILE MILLS**

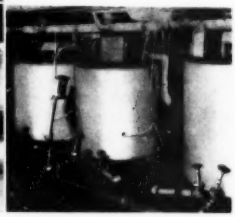
# TANKS and vessels that are CORRECT in design

COLE has specialized in the design, fabrication and erection of elevated tanks, and vessels for the storage of textile liquids, for four generations.

We build dye-vats, kiers, starch-kettles, acid tanks, jib-boxes and other processing vessels for the finishing and dyeing industry—in stainless steel, nickel-clad steel, or of standard steel lined with Monel metal.

Our long experience in the design and fabrication of elevated tanks and vessels for the textile industry may be of help to you. Write for latest Cole catalog—"Tank Talk."





*Established 1854*

**R. D. COLE MFG. CO.**
**NEWNAN, GEORGIA**

ELEVATED TANKS • VESSELS • CYLINDERS
TOWERS • BINS • STANDPIPES

ington also has under construction a one-story addition to its **Cetwick Mill,** Asheboro, N. C., and has purchased **Sarfert Hosiery Mills, Inc.,** Philadelphia, to be operated as an independent unit.

**Her Majesty Hosiery Corp.,** recently organized by Diana Stores Corp., 320 W. 40th St., New York, N. Y., has under construction a one-story mill at Bethel, N. C., for the manufacture of women's full-fashioned hosiery in the grey.

A $25,000 brick and steel factory is under construction for **Catawba Valley Finishing Co.** at Newton, N. C., which will provide over 10,000 sq ft floor space. The firm manufactures children's anklets, and does finishing for mills that produce grey goods.

**Braeburn Knitting Mills,** Penndel, Pa., an interest of Carthage Knitwear Corp., have begun manufacture of full-fashioned sweaters for women in fine wools, nylon, and Dacron.

**Streamline Knitting Mills** have organized a subsidiary under the name of **Barry Knitting Mills,** to specialize in manufacture of full-fashioned sweaters for women, and polo shirts for men and boys. The company will occupy part of Streamline Mills at 3245 Amber St., Philadelphia, Pa.

**Beeren Knit Wear, Inc.,** recently organized, has leased a one-story building at Hickory Grove, S. C. Underwear and outerwear products will be manufactured.

**Postex Cotton Mills, Inc.,** Post, Tex., plan two one-story additions to the mill, one for expansion in the weaving division, the other for the bleachery.

Owen Sterner, formerly general superintendent at Ladd Hosiery Mills, Inc., is now head of a new concern known as **Sterner Hosiery Mills,** Shillington, Pa. Machinery was purchased when the Ladd mills moved to the South, and the quarters formerly occupied by Ladd are now used by Sterner.

**Thayer Woolen Co.,** Oxford, Mass., was recently sold at public auction. The sale included the machinery, building, and land.

**Textron Inc.** has closed its China Mill at Suncook, N. H., one of the largest rayon weaving mills in New England. It is understood that the move is permanent.

**Monroe Knitting Corp.,** New York, N. Y., recently chartered, will operate a mill for manufacture of outerwear. Louis Levin is principal incorporator.

**Hercules-Carnation Knitwear, Inc.,** has taken over and consolidated the Hercules Knitwear Corp. and Carnation Togs, Inc. Headquarters are at 53 West 46th St., New York, N. Y.

An expansion program, reported to cost about $800,000, is under way at **Gastonia (N. C.) Combed Yarn Corp.**

**Pyramid Mills, Inc.,** Gastonia, N. C., recently organized, will manufacture cotton yarns for knitting purposes, it is reported.

**Fayetteville (N. C.) Knitting Mills** plan an expansion program to increase capacity from 1000 to 2000 pairs of hose per week. The company is a subsidiary of Standard Hosiery Mills, Burlington, N. C.

**Cone Finishing Co.,** Greensboro, N. C., has plans under way for an expansion program reported to cost about $400,000.

Installation of equipment to cost in excess of $350,000 is reported being planned by **Henderson (N. C.) Cotton Mills.**

## What the TEXTILE MILLS are doing

**Clark Thread Co.** has an expansion program under way at its Albany, Ga., mill, to cost approximately $110,000.

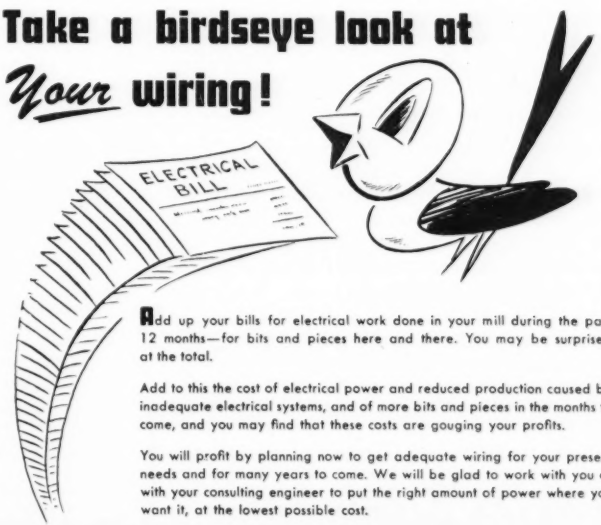
**Opelika Manufacturing Corp.** plans construction of a one-story building at its Hawkinsville (Ga.) mill division, to be used for warehouse service.

**Southern Fabrics, Inc.,** Burlington, N. C., was recently acquired by new interests headed by Seymour Topping of New York City. Additional knitting machines and auxiliary equipment are being installed.

**Anchor-Rome Mills, Inc.,** Rome, Ga., will construct a one-story addition, reported to cost approximately $100,000, with equipment.

Alfred Rice, 630 Fifth Ave., New York, N. Y., is attorney and representative for **Designers Knitwear, Inc.,** recently chartered to operate a knitting mill.


**Take a birdseye look at *Your* wiring!**




Add up your bills for electrical work done in your mill during the past 12 months—for bits and pieces here and there. You may be surprised at the total.

Add to this the cost of electrical power and reduced production caused by inadequate electrical systems, and of more bits and pieces in the months to come, and you may find that these costs are gouging your profits.

You will profit by planning now to get adequate wiring for your present needs and for many years to come. We will be glad to work with you or with your consulting engineer to put the right amount of power where you want it, at the lowest possible cost.

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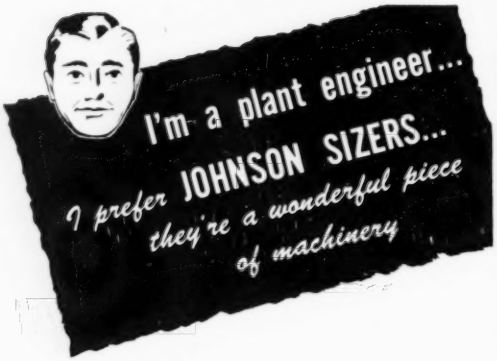
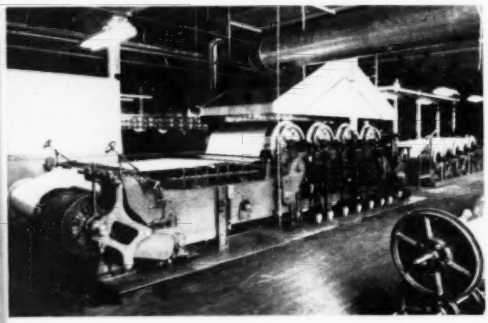
Since 1924



"I look for good engineering in every machine I see. The Johnson sizer is tops in a lot of ways. Take the cylinders. On Johnson slashers these are true and smooth. I like the ends too. They stand the heavy loom beams we are running today.

"I like Johnson's way of assembling and running a slasher at the factory before shipment. We started our Johnson slasher operating *two hours* after it was assembled on our floor. Every part fitted. Tolerances were close. These are only two or three of the Johnson features that speak of the careful engineering that appeal to me. That's why I rate Johnsons as 'tops.' "

**If you'd like to have a step-by-step breakdown of Johnson sizers, showing how carefully Johnson sizers are engineered, write for our 16-page, 3-color illustrated catalog entitled "Johnson Warp Sizers."**

*Charles B. Johnson*

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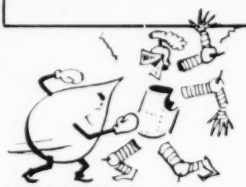
*For the South:* Lucas Associates, Inc. Charlotte 1, N. C.

# TANNER TEXTILE CHEMICALS



**VERSENE FE 3 Specific***
Most powerful iron complexing agent known in normal pH range.

**VERSENE***
Most efficient general complexing agent. Softens water completely and permanently without precipitation.

**• • THE *Versenes****

**VERSENE T***
Prevents and removes iron deposits from fabric treated with concentrated caustic.

**VERSENE FE 3***
Prevents hard water deposits and iron stains.

## VERSENES AND TEXTILES

The Chas. S. Tanner Company, as Southern Agents for the Bersworth Chemical Co., now offers you the Versenes in the South. By controlling metallic contamination, these most modern of chemicals give *cleaner* fibres, *softer* woolens and visibly *whiter* cottons. Among other things, they completely soften hardest water without precipitation.

## OTHER TANNER CHEMICALS

**Suedex Series.**
These Resin Emulsions are semi permanent and easy to use in process finishing. Color yield is excellent and they give varying degrees of stiffness, fullness and finish on broadcloth and cottons of 80 squares.

**Crystal Film.**
These are Co-polymer type resins. They give beautiful transparent finishes. There are four types. Similar to Suedex in function but are used where even finer finishes are desired.

**Ether Gum Binder.**
For all types of clay or talc fillers for cotton goods. Non-yellowing properties.

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The *Durable* Type Water Repellent. Cottons treated the single bath Tantex way will retain their repellency for 3 washings or 3 dry cleanings. It will pay to investigate.

**CST Gum No. 5.**
A weighter type material. Used as a finish but imparts much weight to the fabric.

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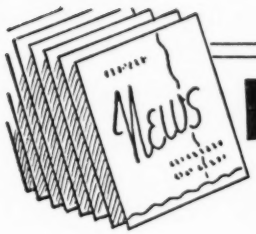


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*This service is restricted to those engaged in operation and management of textile industries.*

NEW PUBLICATIONS ..... ..... .....

**7-1. Industrial Lighting.** New booklet describes and pictures the Gibson line of fluorescent fixtures for industrial plants. Cutaway diagrams show dimensions and makeup of each type with the type finish available explained. Gibson Manufacturing Company 1919 Piedmont Circle N. E., Atlanta, Ga.

**7-2. Stress Analysis.** Bulletin describes the General Radio dynamic polariscope which is described as an apparatus which opens new fields for photo elastic stress analysis. Their low cost permits wider use of this analytical method, and the high light intensity permits photographing stress patterns under dynamic conditions where vibration is present. General Radio Company 275 Massachusetts Ave., Cambridge 39, Mass.

**7-3. Sequestrene.** Booklet describes this sequestering agent which is described as being capable of binding metal ions in an inactive, though soluble, state, thereby protecting critical boil-off, dyeing and bleaching processes from the effects of erratic contamination by metal salts. The chemical nature and action of sequestrene is brought out, and the work it does in removing metals is brought out with formulas. All types of textile applications discussed. Geigy Company, Inc., 89-91 Barclay Street, New York 8, N. Y.

**7-4. Sizing Machine.** High production sizing machine, with moist air drying, for cotton, woolen, worsted and spun rayon yarns described and pictured in new brochure. Described as being available for sizing speeds up to 80 yards per minute according to number of ends and quality of yarn. Many other features discussed. Gebruder Sucker GMBH. M. GLADBACH, RHINELAND, GERMANY.

**7-5. Ventilating Fans.** Catalog describing the Diehl line of industrial exhaust fans and accessories. Each fan pictured and dimensions given along with other specifications. Typical installations discussed. Diehl Manufacturing Company, Somerville, N. J.

**7-6. Engineering Data.** Technical Catalog No. 210 recently published by Arguto Oilless Bearing Company gives detailed information for the specification, installation, and application of bearings for all types of screw conveyors and roller conveyors, along with operating characteristics. Arguto Oilless Bearing Company, 193 W. Berkley St., Philadelphia 44, Pa.

**7-7. Progressive Mechanization.** A new visual program aimed at boosting American productivity by offering a modern, step-by-step approach to the problems of industrial mechanization called "Progressive Mechanization," it is believed by company officials to be the first attempt of its kind to present a concise, workable, consolidation of the principles of production technique and methodology that have made our nation the leading force in world economy. For additional information ask for publication GEA-5789. General Electric Company, Schenectady 5, N. Y.

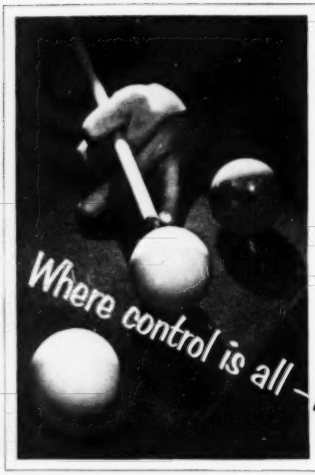
**7-8. Mildew-proofing Report.** A newly revised and expanded Technical Service Report covering mildew-proofing agents with respect to government specifications is now available. Brief summaries of many government specifications calling for mildewproofing of canvas, cotton duck, burlap, rope, net, webbing, cord, belting, thread, twine and felt, included along with description of the methods, and products used. Witco Chemical Company, 295 Madison Ave., New York 17, N. Y.

**7-9. Unit Load Shipping.** A new eight-page booklet released by the Baker-Raulang Company shows how manufacturers, whether products shipped by company-owned fleets or common carriers, can use the unit load shipping technique to make the most of recent Interstate Commerce Commission decisions which lowered pallet-return rates in the central states region. These ICC rulings set a precedent for similar legislation all over the country, making the use of palletized loads more attractive than ever to shippers, according to the booklet. Action photos illustrate the unit load system at work. The Baker-Raulang Company, Baker Industrial Truck Division, 1230 West 80th St., Cleveland 2, Ohio.

**7-10. Card Roll Covers.** Brochure describing the Davis Seamless Roll Covers which are made of rayon and fine combed yarns available. Described as being ribbed to pick up all lint and dust when first installed, and the same lengthwise knit makes it easy to strip off the heaviest accumulation in a few seconds. Other advantages fully discussed and a free trial offer is included. The Textile Laboratories, P. O. Box 1003, Gastonia, N. C.

**7-11. Vegetable Oleic Acid.** A technical bulletin describing the new, unique vegetable Oleic acid, Emersol 240 Vegetable Elaine, is available. Includes a discussion of its main features, specifications, composition and applications, and included are charts illustrating its oxidation stability as compared to other Emeryoleic acids and ordinary grades, and the solubility of both potash and soda soaps. Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

**7-12. Motors and Controls.** New 32-page booklet discusses problems common to the textile industry such as lint clogging, shock and vibration, corrosion, and speed and tension control—and it is shown how solutions can be obtained through correct use and selection of both motors and controls. In addition, eight case histories provide, in the user's words, an actual sampling of the benefits to be gained by co-ordinated application. Westinghouse Electric Corporation, Box 2099, Pittsburgh 30, Pa.

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Permutit Water Softeners provide automatic quality control—assuring a constant supply of completely softened water. Automatic operation completely removes the human element from regeneration, saves costly man-hours of labor and maintenance.

New automatic valves and controls are easily installed on old equipment—converting it to fully automatic operation. To meet increased water demands, replace your present mineral with one of Permutit's new, high-capacity zeolites which will increase both gallonage capacity and flow rates of your present water softening plant.

Profit from Permutit's 40 years of laboratory research and field experience. Write to The Permutit Company, Dept. TI-7, 330 West 42nd Street, New York 36, N. Y., or to Permutit Company of Canada, Ltd., 6975 Jeanne Mance Street, Montreal.

**PERMUTIT CONTROLLED PROCESS WATER ASSURES:**

- **Clear, bright, uniform shades.**
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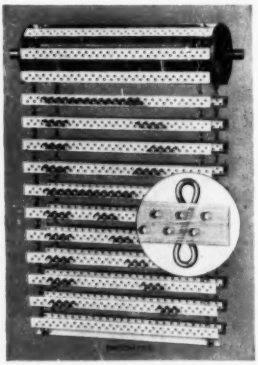
WATER CONDITIONING HEADQUARTERS FOR 40 YEARS

*Another Fine Rice Dobby Product*

## IMPROVED DOBBY BARS

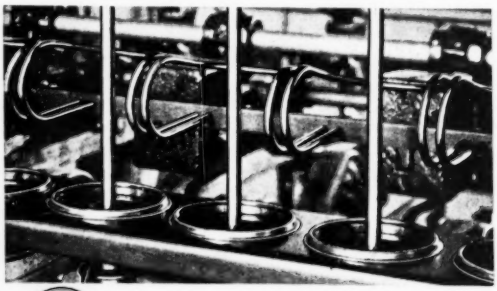
The Improved bar with clear peg holes and eyes that will not twist. Made of thoroughly air dried stock.



**HARRIS "Heavy Duty" Lug Strap**
**Leather and Fibre Adjusting Strap**
**Special Braided Loom Cord**
**"Wirecore" Loom Cord**
**Pick Arm Lug Strap**
**Dobby Pegs**

## RICE DOBBY CHAIN CO.

**Millbury, Massachusetts**
*Southern Representatives*
**R. E. L. HOLT, JR., ASSOC., Jefferson Bldg., Greensboro, N. C.**



## G-C—TWISTER RING GREASE... 40% Higher Melting Point

Laboratory tests prove G-C Twister Ring grease doesn't melt at temperatures 40% higher than other greases. Regular mill users find it stays in rings up to 40 hours and longer. No throw-offs, no staining, no clogging. Even distribution, complete lubrication. Used for twisting any yarns. *SAMPLE GLADLY SENT ON REQUEST*

**GEORGIA-CAROLINA OIL COMPANY**
*Quality Lubricants* G-C *Since 1919*
MACON GEORGIA

**Non-melting oils for top rolls, comb boxes, looms and motors. Ben Boy non-melting greases for dry cans, slashers, calenders, dryers.**

## GENERAL, ECONOMIC, MANAGEMENT

**4 HOW FACTORING CAN INCREASE PROFITS**—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., 2 Park Ave., New York City.

**7 RAYON TELLS ITS STORY TO THE PUBLIC** — Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public.—AMERICAN VISCOSE CORPORATION, 350 5th Ave., New York 1, N. Y.

**12 CONDENSED LISTINGS**—8 page pocket sized booklet listing by plan flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

**20 VISION TESTING EQUIPMENT** — Pamphlet entitled "What you can expect from a good vision program" written by a prominent personnel director, also circular describing the Keystone Occupational Visual Service. KEYSTONE VIEW COMPANY, Meadville, Pa.

**21 CHROMIUM PLATING.** New booklet tells how Walhard engineered hard chromium plating service works for industry. Walhard's capacity to produce, controlled quality, and economical operation are discussed along with pictures of the operations. WALTON AND LONSBURY, Attleboro, Mass.

**22 THE WONALANCET WAY**—Is the title of an editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written. WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

## PLANT AND PLANT MAINTENANCE

**102 "TANK TALK"**—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

**103 HUMIDIFICATION, EVAPORATIVE COOLING** —Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

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**119 MOPPING EQUIPMENT**—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., 121 N Aberdeen St., Chicago, Ill.

**133 PAINTING SPECIFICATIONS AND COLOR CHIPS**—Industrial Paint and Color Guide, CC446, gives full painting specifications for exterior and interior of industrial plants with complete color samples.—THE SHERWIN-WILLIAMS CO., Painter Maintenance Div., Cleveland, Ohio.

**137 PUMPS AND COMPRESSORS**—Bulletin Q P-11 presents the standard types of Gardner-Denver air compressors, centrifugal pumps, steam and power reciprocating pumps in a brief and comprehensive manner to enable the prospective user to select the size and type for specific needs.—GARDNER-DENVER CO., Quincy, Ill.

**150 RIHCO HUMIDIFIERS AND COOLING SYSTEMS**—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems.—ALDRICH MACHINE WORKS, Greenwood, S. C.

**151 INDUSTRIAL BRUSHES**—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., 444 Pompton Ave. Cedar Grove N. J.

**157 MAINTENANCE**—Silicone water-repellent for masonry described in data sheet XR-129G-1. Properties and application of an invisible, durable, non-


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"The Leather with the Hair On."

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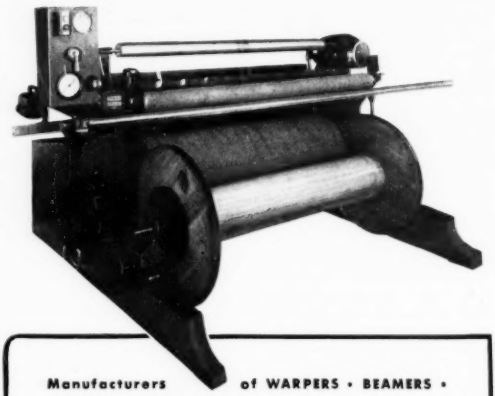
## ALLEN Model "G" High Speed Warper PROVEN IN DESIGN... PRINCIPLE AND PERFORMANCE

Here's a warper proven all the way . . . proven in principle and design. In production and quality of work it's making news. Here are the pay-off features built into Allen Model "G" High Speed Warper. UNIFORM END DENSITY is maintained by hydraulic pressure of beam against drive cylinder. Push button controlled VARIABLE DRIVE delivers maximum possible production on any yarn. CONTROL PANEL tells-at-a-glance yardage, yarn speed, and hydraulic pressure. Also includes control levers for beam positioning and beam pressure. SAFETY CONTROL ROD gives operator perfect control from any position . . . starts warper gradually, or jogs. EASE OF MAINTENANCE AND ACCESSIBILITY of flat friction clutch and internal brake.



Allen Warper COMPANY

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Manufacturers of WARPERS • BEAMERS • BALLERS • COMBS • CREELS • TABLE WARPERS and all WARPING EQUIPMENT. Replacement parts for SACO-LOWELL • ENTWISTLE and ALLEN WARPERS

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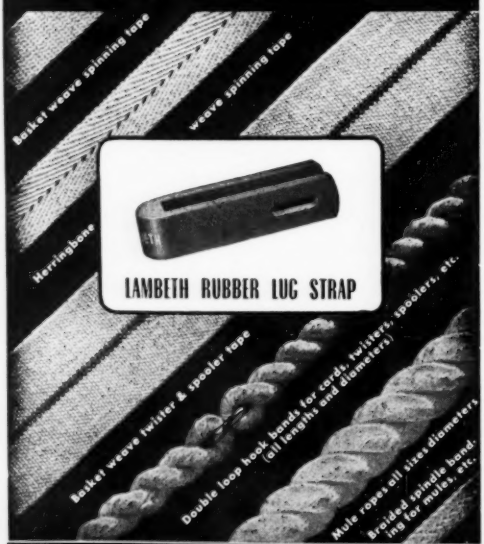
FOR SPINNING, TWISTING, SPOOLING, WEAVING


Basket weave spinning tape
weave spinning tape
Herringbone
LAMBETH RUBBER LUG STRAP
Basket weave twister & spooler tape
Double loop hook bond for cards, twisters, spoolers, etc. (all lengths and diameters)
Mule ropes all sizes diameters
Braided spindle bonding for mules, etc.

LAMBETH ROPE CORPORATION
Plants at New Bedford, Mass. and Kings Mountain, N. C.

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MEET SPECIFIC NEEDS OF PROCESSING

Much of the manufacturing capacity of the extensive Kali plant is devoted to the production of specialized chemicals, formulas for which have been worked out by Kali laboratory technicians to meet the problems of textile mills. Among these efficient chemicals are:

- NYLON SIZE — NYLON CONING OILS.
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- HYDROXY* SIZES for Acetate, Viscose, Bemberg, Filament Yarns. Also for cut staple and mixtures.
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*Manufacturing Chemists*
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plugging, silicone masonry water repellent that is inexpensive and easy to apply fully discussed.—DOW-CORNING CORP., Midland, Mich.

**167** **COLOR CONDITIONING FOR INDUSTRY** — Booklet describing how color is used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale.—E. I. DU PONT DE NEMOURS & CO., INC., FINISHES DIV., Wilmington, Delaware.

**179** **BETTER WAYS**—Form 2020, condenser catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Box 97, Toledo, Ohio.

**187** **SILICONE INSULATION**—Data Sheets 14C describing silicone electrical insulating varnishes used in class H equipment. Protection and longer life with Silicone insulation described. — DOW CORNING CORP., Midland, Mich.

**188** **PROGRESSING-CAVITY PUMPS**—A new principle in pumps. Self-priming, positive displacement, uniform flow features discussed. — ROBBINS & MYERS, INC., Pump Div., Springfield, Ohio.

**190** **HOW TO SWEEP WITH A COTTON MOP**—Four-page folder showing correct technique for sweeping floors in various mill departments, including care of mops, short cuts, etc.—G. H. TENNANT CO., 2530 N. Second St., Minneapolis 11, Minn.

## POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION

**206** **LOOM MOTOR BULLETIN**—The new design of this ball bearing motor is claimed to represent an advance in the design of loom motors fully discussed.—THE LOUIS ALLIS CO., 427 E. Stewart St., Milwaukee, Wisconsin.

**207** **TRICO OILER INSTALLATION**—Twelve interesting pages of actual "on the job" photos of Trico oiler applications on nationally recognized machinery and equipment.—TRICO FUSE MFG. CO., 2948 N. 5th St., Milwaukee 12, Wisc.

**218** **BALL BEARINGS FOR TEXTILE MACHINERY** —A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

**226** **COTTON CARD DRIVES**—Booklet B-4596 which describes Westinghouse individual cotton card drives. Through the proper design of card motors by Westinghouse, individual drive is now practical and the booklet gives full information. — WESTINGHOUSE ELECTRIC CORPORATION, P. O. Box 868, Pittsburgh 30, Pa.

**254** **LOOM RECONDITIONING PROGRAM AT TALLASSEE MILLS**—Reprint of exclusive story on the loom reconditioning program at one of the biggest southern mills. This article shows how central lubricating system was built into each rebuilt loom as part of the improvement program. — BIJUR LUBRICATING CORPORATION, Rochelle Park, N. J.

**259** **SUNOTEX MACHINE OIL**—Booklet describing this machine oil as being "custom-made" for the textile industry. Advantages discussed and pictures of uses which include knitting machinery, SUN OIL COMPANY, Philadelphia 3, Pa.

**266** **LUBRICATION** — Bulletin BG2-DC, describes properties of Silicone greases used in motors at high speeds and temperatures, on oven conveyors, tenter frames, can dryers, etc. Decrease by 10 to 1 in re-lubrication requirements described.—DOW-CORNING CORP., Midland, Mich.

## INSTRUMENTS, STEAM SPECIALTIES

**300** **TEXTILE DIGEST** — 18-page manual reviewing performance-proved procedures for improved handling of more than 60 essential cleaning and related operations in textile mills.—OAKITE PRODUCTS, INC. 22, Thames St., New York, N. Y.

**301** **JOHNSON ROTARY PRESSURE JOINTS**—Bulletin describing the rotary pressure joints which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes,


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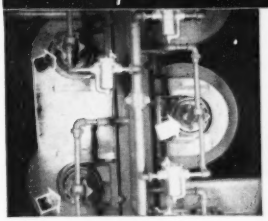

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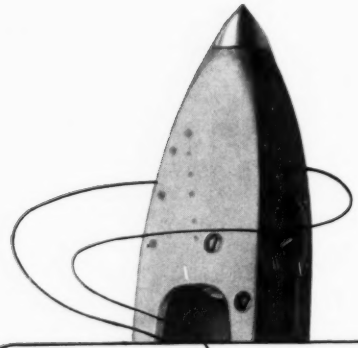

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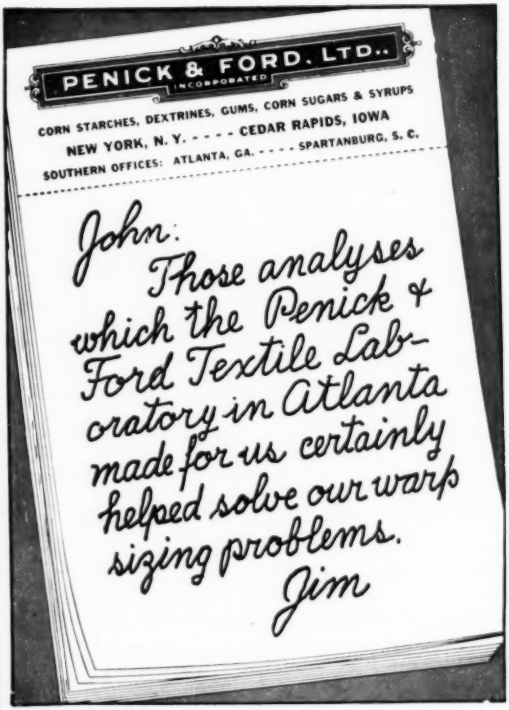
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dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

**303** **PROCESS CONTROL EQUIPMENT**—Catalog containing brief description of standard and special process control equipment engineered for textile industry. Includes schematic diagrams. — MASON-NEILAN REGULATOR CO., 1190 Adams St., Boston, Mass.

**316** **HYDRAULIC POWER UNITS** — Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

**321** **RED-RAY BURNERS**—Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W 45th St., New York, N. Y.

**334** **TEXTILE MILL INSTRUMENTS** — Eight-page bulletin 98180 describes the use of automatic control instruments used on such processes as size cooking, storage kettles, size boxes, slashers, dye vats and driers. —TAYLOR INSTRUMENT COS., Rochester, N. Y.

## CARDING, SPINNING, WINDING

**402** **AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS**—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

**408** **CARD GRINDING INFORMATION** — Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

**416** **THE BRIEF SAGA OF THE RING TRAVELER** —An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered. — NATIONAL RING TRAVELER CO., Pawtucket, R. I.

**419** **TEXTILE APRONS**—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

**427** **WINDING AND CREELING WARP YARNS**—Universal's Bulletin No. 442 contains an interesting treatment of this subject.—UNIVERSAL WINDING COMPANY, Providence, R. I.

**430** **DIXON DATA** — Dixon house organ entitled "Dixon Data," which is available in a new form every other month. These house organs contain information on spinning problems as they relate to saddles and component parts. — DIXON LUBRICATING SADDLE CO., Bristol, R. I.

**432** **PRECISION TEXTILE WINDING**—Bulletin on Kidde Tensions and Density Control for winding rubber cones.—WALTER KIDDE & CO., INC., Belleville, N. J.

**436** **MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER**—Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

**437** **SPINDLE TAPE LACING EQUIPMENT**—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

**438** **HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING**—Literature shows high-speed Face Drive Twister for accurately building tapered or straight-end headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

**443** **COMPARATIVE YARN TABLE**—Chart giving woolen number (cut and run system), also cotton worsted and metric system; also, Comparative Rayon Denier Yarn Table.—VICTOR RING TRAVELER CO., Providence, R. I., and Gastonia, N. C.


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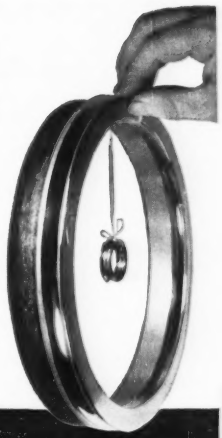

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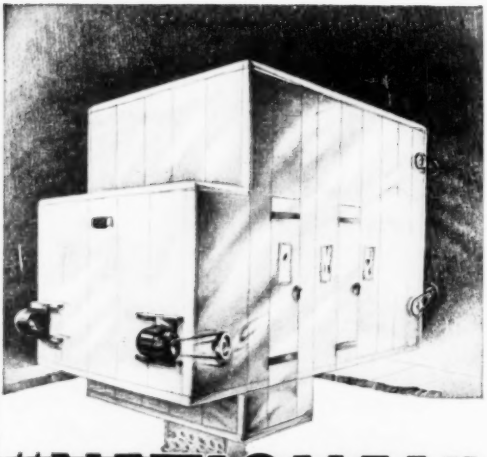

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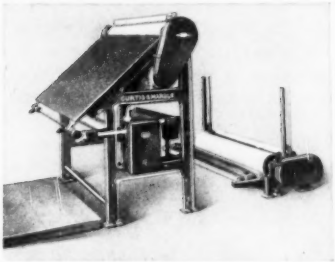

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**445** **ROLLER BEARING SPINDLES**—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described. — THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

**446** **WINDING MACHINES**—Principles and Practices is the title of Bulletin No. 339. Part 2 on the No. 44 Roto-Coner is profusely illustrated with exploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

## WEAVING, SLASHING

**509** **MULI-MOTOR SLASHER DRIVES** — Booklet designed to bring the descriptive information on multi-motor slasher drives up to date, and emphasize the improvement in the drive through the use of Rototrol for the control of winding tension.—WESTINGHOUSE ELECTRIC CORP, 511 Wood St., Pittsburgh 30, Pa.

**512** **LOOM PRODUCTION CALCULATOR** — Handy pocket slide rule available for computing per cent efficiency of a loom. Simply set operative hours and loom speed and the per cent efficiency can be read on the side opposite the pick counter reading.—VEEDER-ROOT, INC., Textile Counters Div., Hartford 2, Conn.

**518** **NIAGARA TWIST-SETTER**—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., 748 Rice St., Atlanta, Ga.

**521** **STEEL WARP BEAMS**—20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

**524** **JOHNSON WARP SIZES**—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis.—CHARLES B. JOHNSON MACHINE WORKS, Piercy and Holsman Sts., Paterson, N. J.

**529** **STRAPPING**—Looms and harness strapping, complete line. Full information supplied on request. —TON TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

**530** **ROTARY UNIONS**—New catalog shows how to cut costs, get better sealing, on can dryers, slashers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count." — PERFECTING SERVICE COMPANY, Atando Ave., Charlotte, N. C.

**531** **EVENNESS TESTER**—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

## DYEING, FINISHING, CLOTH ROOM

**604** **STABILON**—For Napthol Dyeing and Printing—reduces cracking and brightens Napthol shades by stabilizing fast color salts and bases. Presents premature decomposition of stock feeder solutions and print pastes—fully discussed in booklet available.—AMERICAN ANILINE PRODUCTS, INC., 50 Union Square., New York, N. Y.

**615** **HIGH PRODUCTION EXTRACTORS FOR RAW STOCK—YARN—HOSIERY**—Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs. —FLETCHER WORKS, INC., Philadelphia, Pa.

**616** **FINISHING DRIVES**—32-page booklet covers complete drives Westinghouse has engineered for the textile finishing industry. Describes all types of finishing ranges and discusses advantages of Westinghouse drives for these installations. "Packaged" drives for batch processes covered. — WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittburgh 30, Pa.

**617** **AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING**—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation. — TAYLOR INSTRUMENT COMPANIES., Rochester 1, N. Y.

**624** **STRAIGHTENING THE WEFT IN CLOTH**—Article describing the progress made in this field, and latest machinery available for both skewed and bowed weft straightening.—MOUNT HOPE MACHINERY CO., Taunton, Mass.

**629** **SEVEN TANK BALL BEARING CRABBING MACHINE**—Circular 1073 describes this 7 tank stainless steel roller bearing open width machine for scouring, open soaping, crabbing, dyeing, etc. Each pair of squeeze rolls is operated by separate D. C. motors controlled by a built-in dancer or compensating roll. Pressure supplied by air cylinder or air motors and the final nip is of 15 ton capacity for extracting, according to the circulars.—BIRCH BROTHERS, INC., Somerville 43, Mass.

**641** **PACKAGE DYEING**—Machines for dyeing extracting, and dyeing yarn in package and on beams described in illustrated booklet on the theory of package dyeing and equipment for this process.—SMITH, DRUM & CO., Philadelphia 33, Pa.

## DYESTUFFS, CHEMICALS, SOAPS

**703** **WATER REPELLENTS**—Data sheet 1043 describes application of De Cetex 104, which is described as a durable, water repellent finish that is easily applied on conventional finishing equipment and its resistance to spotting; laundry or dry cleaning durability is good. DOW-CORNING CORP., Midland, Mich.

**704** **INTERPRETATION OF ANALYSIS**—The booklet "Interpretation of Analysis for the Layman" describes many of the common analytical tests made on surface-active materials, and illustrates how the analytical figures are used to deduce the composition of several materials. The booklet also contains a glossary of many

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terms useful to those who work with industrial chemicals, and a brief discussion of the role Nopco processing chemicals are playing in industry today. — NOPCO CHEMICAL COMPANY, Harrison, N. J.

**713** **LIOVATINE ED**—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, 61 Van Dam St., New York City.

**717** **CERFAK 453**—Descriptive 4-page folder includes wetting speeds and rewetting data as well as detergency data of this fast, economical and versatile surface action agent useful in all wetting operations.—E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

**718** **FLAKED CERFAK**—Anionic detergent with fast wetting ability, excellent for all scouring or wetting operations, according to this four-page folder which includes charts on concentrations to be used.—E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

**745** **RAPIDASE FOR DESIZING**—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

**751** **LOMAR PW**—Bulletin No. 21 describes the actions and uses of this dispersing agent. Two general functions described as prevention of rapid sedimentation and decrease in viscosity—fully discussed.—JACQUES WOLF & CO., Passaic, N. J.

## KNITTING

**801** **THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE**—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

**810** **ALUMINUM BEAMS**—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

**812** **CIRCULAR KNITTING MACHINES**—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machine.—H. BRINTON COMPANY, Kensington Ave., and M. St., Philadelphia 34, Pa.

## SEWING MACHINES

**904** **CONDENSED CATALOGUE**—A 40-page pocket-sized booklet illustrating and describing sewing machines adaptable for practically all phases of the needle trade.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

**912** **ELASTIC HEMMING AND INSERTING MACHINES**—Bulletin No. 833, illustrating and describing the improved high speed machine Style 992-5, for work on undergarments, dresses, pajamas, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

## MATERIALS HANDLING

**1003** **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

**1006** **LANE CANVAS BASKETS**—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

**1011** **TEXTILE TRUCKS** — Booklet describing doff boxes, frames and trucks, yarn, waste, platforms, conditioning, steep lap, fiber, utility trucks, etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

**1031** **MOTOR-DRIVEN TROLLEY HOISTS**—12 page illustrated booklet describing Robbins & Myers motor-driven trolley hoists. Capacities from 1000 to 20,000 pounds. Bulletin 805-A. — ROBBINS & MYERS INC., Hoist & Chain Div., Springfield, Ohio.

## MISCELLANEOUS

**1101** **AUTOMATIC BOBBIN REFINISHER** — A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2300 N. 39th St., Milwaukee, Wis.

**1102** **BALING PRESSES**—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

**1103** **UNBRAKO SCREWS**—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

**1121** **FOOT PROTECTION**—Booklets and literature available on the Stahmer wooden sole shoe which is especially designed for wet-process work, since it reduces slipping. Cost is low and many styles and types are available, and all have quality sanded heavy maple wood soles.—F. J. STAHMER SHOE COMPANY, 2349 Boies Ave., Davenport, Iowa.

July, 1952

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## News in Brief

(*Continued from page 57*)

**New Secretariat for Canada.** A permanent secretariat has been established for the Textile Technical Federation of Canada. The organization centralizes and coordinates activities of the Eastern and Western Divisions, Textile Society of Canada; the Ontario and Quebec Sections, Canadian Association of Textile Colourists and Chemists; the Ottawa Valley Textile Association; and the Cornwall District Textile Association. John M. Merriman has been appointed executive secretary, and headquarters of the secretariat will be in the Federation's offices at 1410 Guy Street, Montreal, Que.

**Gas Dryers Affect Cotton Dyes.** Changes in color have been noted on cottons dyed with fast-dye and dried in gas-heated home dryers. The problem was called to the attention of the general research committee of the AATCC.

**U. S. Raw Wool Imports.** In 1951 the United States imported 364,336,000 pounds of clean raw wool from more than 28 foreign countries.

**High - Speed Motion - Picture Camera.** A new camera, developed by the Battelle Institute, Columbus, Ohio, designed to take pictures at speeds up to 100,000 frames per second, is expected to find the answers to questions which have confronted science and industry for a long time. It is reported that a single photographic series of 500 frames can be projected as a motion picture immediately after development of the film without reprinting and reregistering of frames.

**Degumming Process for Ramie.** A new process to degum ramie has been announced by William C. Kaleel, a promoter of production tests at Lantana, Florida. Dr. John Osmar, West Palm Beach, manager of Osmar Chemical Processing, Inc., aided in developing the new process.

**Spanish Silk Revival?** The Spanish government is trying to stimulate domestic raw silk production and confidently anticipates a rise in cocoon production.

**Wool Weaving Mill for Pakistan.** The Punjab Cooperative Department is reported planning to establish a mill at Lawrencepur, Attock District, Punjab, Pakistan. The mill is to manufacture woolen cloth and carpets.

**Production of Carded Cotton Yarn.** A preliminary report on mill operations shows that production of carded cotton sales yarn during the first quarter of 1952 totaled 159,638,000 pounds, which exceeds production during the same period in 1951.

**U. S. To Buy German Textiles.** Textiles and clothing are to be procured on the German economy, to be paid for by the Bonn government from occupation costs, according to notice issued by the U. S. Army Quartermaster Procurement Center.

**Filament Stocks Drop, Staples Rise.** Positions of the rayon weavers were improved by a drop of eight million pounds in inventories of filament stocks. 60 million pounds were on hand in the first quarter of 1951 as compared to 52 million pounds in the first quarter, 1952. Stocks of staple yarn rose from 49 million pounds in the first quarter of 1951 to 64 million pounds in the first quarter, 1952,

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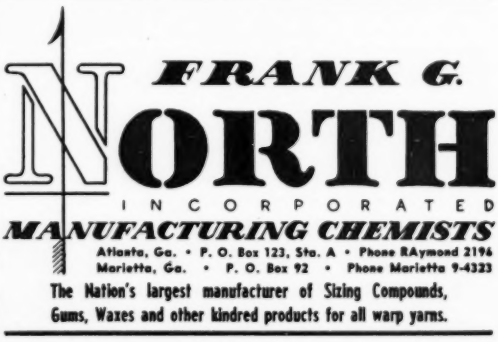
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## Patents Issued Recently

A patent has been issued for a "spindle and bobbin shaft mounting for roving frames." The patent relates to self-aligning ball bearing assemblies for supporting bobbin shafts and spinning shafts in a roving frame for maintaining proper alignment.

A patent has been issued for a "sizing tube." The tube is designed to be collapsible to permit shrinkage of the yarn, and easy removal from the tube without damage to the yarn or the tube.

A "tension apparatus for loom warp yarns" has been patented. The apparatus is designed to prevent set marks in cloth when it is necessary to stop the loom.

A "pattern control means for knitting machines," recently patented, is an attachment to permit circular knitting machines to have a larger pattern range than has heretofore been possible.

Recently patented, a "triple spout oil can" is particularly adapted to be used in the textile industry for lubricating spinning frames and other processing machines.

A patented "stop motion for carding machines" stops the card whenever the density of the sliver decreases beyond a certain amount.

representing an increase of 15 million pounds.

**Synthetic Fabrics Continue Upward Trend.** Production of all-nylon fabrics by the weavers in this group has now reached the level of one-fifth of the total output. Total production during the first quarter reached 65 million yards, which represents an increase of 67% as compared to the first quarter of 1951.

**Texas Mill Has 50-Year Anniversary.** Established in 1902, Brenham Cotton Mill, Inc., Brenham, Texas, celebrated its 50th anniversary May 6-7. Employees, their families, friends, and visitors attended open house and a barbecue dinner.

**Golden Fleece Award Winners.** Receiving the National Association of Wool Manufacturers' annual Golden Fleece award this year were: Thomas W. MacLeod, president, Stern Bros. department store; Herman Hickman, football coach, Yale University; and Federal Judge Thomas F. Murphey. The award symbolizes "good dress" by men of achievement in various fields of endeavor.

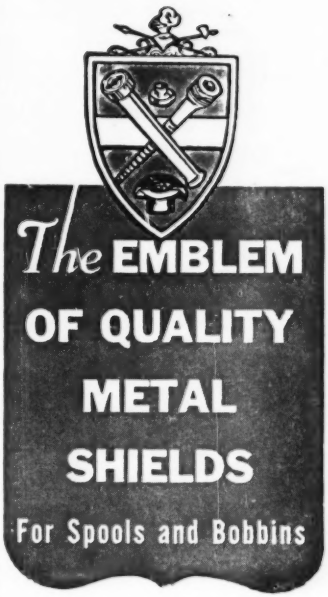
**World Wool Production.** World production of raw wool in 1951-52 is now estimated at 3,950 million pounds (greasy basis) compared with an earlier estimate of 4,080 million pounds. The reduction of 130 million pounds is due largely to a decline of 100 million pounds in the Australian estimate.

**Silicone Makes Nylon Waterproof.** A silicone applied to nylon fabrics at Oakroyd Dyeing Co., Bradford, England, makes the fabric waterproof and also safeguards it against staining. The company recently demonstrated the process.

**Chicopee Research Completed.** The Chicopee Manufacturing Co. has completed its textile research project at Texas Tech. The research results will be placed into the company's mill operations, according to George W. Pfeiffenberger of Chicopee's Springfield, Mass., office.

**Philippine Textiles.** Introduction of new automatic looms is expected to cut production costs approximately 50% and increase wages and production for weavers in rural areas in the Philippines. Output potential can be upped from 5 yards to 20 yards per day.

**Mills Urged to Meet Southern Competition.** Rudolph M. Ashner, partner of Werner Textile Con-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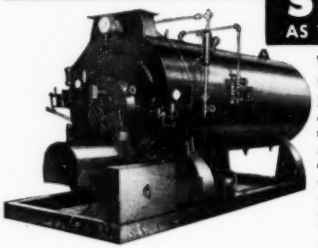

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sultants and P. O. M. Company, Industrial Consultants, in an address before the Fall River Chapter of the National Association of Cost Accountants, rated high labor costs and labor attitudes as the major factors accounting for the advantages of the South over New England textile mills. Mr. Ashner warned that over-diversification in different styles and patterns means not only additional manufacturing costs, but usually increases the amount of capital tied up in raw materials, goods in process, and finished goods. Executives in New England mills rated the importance of ascertained factors as follows:

| Relative Importance | Weighted Points |
|---|---|
| 1st—Wages | 380 |
| 2nd—Work Loads | 341 |
| 3rd—Fringe Benefits | 315 |
| 4th—Union | 243 |
| 5th—Taxes | 236 |
| 6th—Old Building | 145 |
| 7th—Old Machinery | 113 |
| 8th—Employee Relations | 95 |
| 9th—Low Efficiency | 77 |
| 10th—Others | 44 |
| Weighted Total | 1989 |

**Case of the Cotton Carpet.** In the May 1952 issue of The Analysts Journal, William F. C. Ewing, president, Alexander Smith, Inc., had this to say about cotton's reception in the floor covering industry: "One other fiber (cotton) is currently having a great impact on the production and sale of soft floor coverings . . . Cotton is the outstanding refutation of the now outmoded concept that to be any good a carpet fiber must be wool or physically 'just like wool.' . . . In order to produce cotton carpeting of the type so popular today, it was necessary to develop entirely new production techniques which would capitalize on the properties that cotton fibers possess, rather than somehow get around what used to be considered their weaknesses."

**Bulgarian Cotton Mill.** Work has been started on a new cotton spinning mill in Sofia. Upon completion, the mill will be the largest in the Balkans with 60,000 spindles. The spinning capacity of Bulgaria will be raised 26% by the new mill, which is being built under the guidance of German technicians with machinery from eastern Germany.

**Japanese Silk Industry Improvements.** The old contract system whereby Japanese parents "sold" their children to silk spinning mills—the contract system—has been abolished. The minimum age for starting work in a mill is now 15 instead of 11 as it was formerly. Men and women are to receive the same wages for doing the same work, and women and youths may not work night shifts.

**Collins and Aikman Scholarship.** Four-year scholarships have been established in the North Carolina State College School of Textiles by Collins and Aikman Corporation. A fund of $2,400 has been set up to create the scholarships.

**Use More Hosiery.** Canadian women use more full-fashioned hosiery than ever before. On a per capita basis, each woman over 15 years of age used 8.4 pairs of stockings in 1950.

**AATCC Research Funds.** The New York Section of the AATCC has turned over more than $21,000 to the general research fund. The money represents profits from the national convention held in New York last fall. The council decided that the 1954 national convention will be held in Atlanta, following the 1952 meeting in Boston, and the 1953 meeting in Chicago.

**Impregnated Silk.** The Milanes firm of Vanna has recently introduced an impregnated silk fabric called Vannironi, which is transparent like an Indian summer fabric. Thus two colors of the fabric may be combined with one showing through the other.

**Dr. Nadler Predicts.** Dr. Marcus Nadler, New York University economist, added a note of op-


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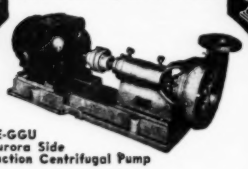

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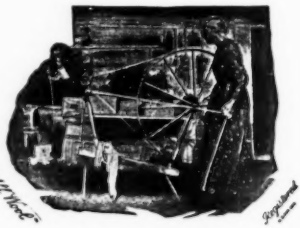

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timism to the textile picture in a speech before the National Association of Woolen Manufacturers. Dr. Nadler stated that the outlook for the textile industry was favorable though it would continue to operate indefinitely in a buyer's market. The high-cost producers' days are numbered, he claimed.

**North Borneo Textile Mills.** Brothers Stork and Co., Apparatenfabriek, of Amsterdam have been given orders for the construction of two new textile mills in North Borneo.

**Vibrating Floors.** The problem of floor vibration was solved by one tricot manufacturer whose machines were located on the ground floor. He broke through the flooring, poured a 20 x 8 foot reinforced concrete slab 4 feet deep

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A small hole and air pressure have solved a bothersome container problem for customers of Rohm & Haas Company. Some time ago, the company recognized the desirability of a new package for paste used for shrinkage control. In designing the container the question arose: "How are you going to get the semi-solid chemical out of a fiber drum?"

Solving this problem required ingenuity, but proved fairly simple. A ½-inch hole was drilled in the bottom of the drum and plugged with a cork. Now to remove the chemical paste, the cork is pulled and air pressure applied at the hole, as shown in the photos.

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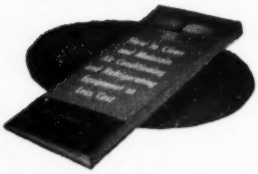

THIS handy little booklet tells all about good maintenance of air conditioning equipment. How to get rid of lime scale . . . How to prevent it from forming. Tells how to fight slime, how to prevent it from fouling up lines, tanks, spray jets. Gives details on cleaning finned coils of air-washers . . . cleaning aluminum plates and screens . . . descaling cold diffusers . . . cleaning glass filter screens, etc.

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### *N. C. State Phi Psi Chapter Honors Herman Cone*

The North Carolina State College Chapter of Phi Psi, national professional textile fraternity, has presented its "Man of the Year" award to Herman Cone of Greensboro, N. C., president and chairman of the board of the Cone Mills Corporation.

An engraved trophy was awarded Mr. Cone in recognition of his work for the advancement of the textile industry. Also, his name will be inscribed on a gold cup which stands permanently in the lobby of the State College School of Textiles Building.

The presentation was made on behalf of the fraternity by James McArthur of Greensboro, N. C., president of the college chapter of Phi Psi.

In the accompanying photo, Mr. Cone (right) is being congratulated by Prof. T. R. Hart, director of instruction in the School of Textiles at N. C. State.

for each machine, and set up the tricots on their independent pedestals.

**American Competitive Enterprise.** A 32-page, four-color, cartoon booklet, "Johnson Makes the Team," interprets, fosters, and shows the fruits of competitive enterprise by using the growth and development of B. F. Goodrich as a case history. The booklet is published primarily as a free teaching aid in upper grades, junior, and senior high schools.

**Rayon Imports.** Rayon filament yarn imports totaled only 56,900 pounds for the first quarter of the year, an insignificant amount compared to the 3,469,800 pounds brought into the country during the first quarter of 1951. March imports alone totaled a mere 11,900 pounds, compared to 987,900 pounds in March 1951.

**World Cotton Production.** World cotton production for 1951-52 is now estimated at about 34,765,000 bales from 82,425,000 acres, representing an increase of 265,000 bales and a decrease of 2,205,000 acres as compared to a previous estimate.

**Substitution of Kenaf for Jute.** Inasmuch as the U. S. depends on Asiatic sources for its jute, the Quartermaster Corps is encourag-


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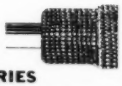

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ing the substitution of kenaf, which can be grown in Cuba and several southern states. Suppliers of burlap to the Army are authorized to manufacture it either from jute or kenaf. A similar policy will be applied to other items.

**Hosiery Mills Optimistic.** A general feeling of optimism is reflected in the full-fashioned industry in the U. S. in that practically all leading manufacturers have authorized a continuing program of systematic machine replacement, according to a survey released by Textile Machine Works.

**Bandage Conforms to Body Contours.** A cotton bandage, developed by the U. S. Department of Agriculture's Southern Regional Research Laboratory, is readily adaptable to the contours of the body. An open-weave gauze is allowed to shrink freely and completely in a caustic soda solution of about 20-30 per cent concentration. After washing out the caustic and neutralizing with a dilute acid, the gauze is thoroughly washed and then dried with a minimum of tension. In shrinking, the yarns develop crimp and kinkiness, and the resultant elasticity in both directions is sufficient to permit the modified gauze to conform readily to body contours.

**NPA Orders Revoked.** Inventory control over binder and baler twine is provided by listing these items in NPA Reg. 1, Table 1A, according to NPA release 2246. The action cancels NPA Order M-58. NPA Order M-23 has been revoked to eliminate the limitations for acceptance of rated orders on carded cotton sales yarn. Details are provided in NPA release 2245.

**Austrian Textile Production.** Austrian textile output reached its highest level in 1951. The level is unlikely to be maintained this year, according to views expressed by Austrian textile manufacturers. Exports of finished goods, yarns, and fabrics have encountered serious difficulties in international markets, and the Austrian textile industry has been made more dependent on the home market and on exports to her traditional customers, particularly West Germany.

**Arthur Besse Memorial Trust.** The NAWM executive committee has approved the Arthur Besse Memorial Trust, established to collect through voluntary contributions, funds for scholarships at any textile school, school of design, or other institution which teaches wool manufacturing as part of its curriculum. Recipients of the scholarships will be chosen by its trustees.

## Now We Have a Contour Type Top Sheet!

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SALESMAN for TEXTILE SPECIALTIES in North Carolina-South Carolina and Georgia, for a well established company. Give full information. Replies kept confidential. Reply to Box No. 519, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

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